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A Study of Common Stories Told by Nursery School Children on the Children's Apperception Test

by

Mary A. Millar, B. A.

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THE UNIVERSITY OF ALBERTA

A STUDY OF COMMON STORIES TOLD BY NURSERY SCHOOL CHILDREN ON THE CHILDREN'S APPERCEPTION TEST

A DISSERTATION

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MARY AILEEN MILLAR, B. A.

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M.A.M.

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Chapter I

INTRODUCTION TO THE PROBLEM

Psychiatric clinicians have long recognized the importance of developing instruments to assess the personality structure of the individual. It was with this in mind that Henry Murray developed the Thematic Apperception Test (TAT) in 1935 for use with children and adults of both sexes. (32) Although the test found considerable success with adults and probably ranks second only to the Rorschach in clinical use, those working with children have become dissatisfied with the TAT in this respect because it is structured on the adult level of emotional experience. (9, 11, 12, 24, 38)

To meet the need for a new instrument, Bellak, in 1949, developed the Children's Apperception Test (CAT) for use with children in the three to eleven age group. (9) To date very little has been published on the clinical usefulness of this test.

Scoring and interpretation of tests of apperception like the TAT and CAT have in the past relied mostly on the judgment and experience of the individual clinician. However, more recently, there has been an increasing emphasis on the value of normative material which has been statistically validated. (18, 24, 28, 33, 34, 35, 37) Normative material presupposes a frequency of occurrence of common elements in the protocols, the "elements" being any picture detail, event or idea composing the story. Thus, the clinician, in interpreting a protocol with reference to normative data, can ascertain from the subject's responses the degree to which the subject conforms to group modes of

behavior.

There is a growing appreciation that only after one has statistical information as to what is common can one make an accurate interpretation. Most clinicians are far too easily disposed to interpret on the basis of their own preconceived ideas of what elements in the stories are significant and what are not. Furthermore, norms acquaint the clinician with the type of material that may be obtained on the test. If time is a factor, or if only specific areas are to be explored, selection of cards can be based on normative material.

With a firm realization of this, the present study was undertaken to provide normative data for nursery school children on the CAT. The approach was to analyze stories for the frequency of occurrence of elements and then combine these elements to gain the common stories. This work has been arranged so that the common elements appearing in the stories can be tabulated for the five-year old boys, five-year old girls and the total five-year old group, for the four-year old group and for the pre-school group as a whole (3, 4 and 5 year olds). The common elements are then brought together to form the common stories.

The general outline of this thesis is as follows:

I. A general introduction to the CAT, the need for normative data and the outline of the thesis.

II. A survey of the literature including: a brief review of the projection and projective techniques; and various tests for eliciting children's apperceptions; a summary of normative material available on the CAT and the general problem of norms themselves.

III. Methods employed in the study including subject information and administration procedures.

IV. The method of analysis for formal characteristics of the story is discussed, the categories and sub-categories are defined and the application of the method outlined.

V. The results are presented in the form of means and standard deviations for time elements and story length, frequency tables, for characteristics of story structure and content, and common stories in prose form.

VI. Summary and conclusions drawn from the study.

VII. Recommendations for the application of the results and for other research projects.

Chapter II

SURVEY OF THE LITERATURE

A. Projection and Projective Techniques

Although it is not the purpose of this thesis to enter into a theoretical discussion of projection and projective techniques, it is thought necessary to discuss the problems encountered in trying to define these terms since it is upon these principles that the TAT and CAT are based.

The term projection was first introduced by Freud as early as 1894 - "(the psyche) ....acts as if it had projected this excitation into the outer world." (22) Used originally in connection with the psychoses and neuroses, it came to take its place among the defense mechanisms in psychoanalytic literature, as "a defensive process under sway of the pleasure principle whereby the ego thrusts forth on the external world unconscious wishes and ideas which, if allowed to penetrate into consciousness, would be painful to the ego." (25) However, with the increasing use of the term, the meaning has broadened until, as Van Lennep points out, "nowadays in America, projection is used to include all kinds of utterances and expressions of the subject as far as these are personal and not decided by the rules of his society." (46) Fortunately more and more authors are realizing the necessity of refining the concept of projection and are defining the various mechanisms which have been classified as projection. (1, 5, 6, 7, 10, 16, 17, 33, 39)

While "projective techniques" as such have been in use for some time, the term was first introduced by Frank in 1939. (21)

He stressed the fact that in these techniques the subject interprets the stimulus in terms of what it means to "the personality who gives it, or imposes upon it, his private, idiosyncratic meaning and organization."

Projection, in the sense it is used in projective techniques, has developed from the idea of a defense mechanism to the idea that the individual perceives contemporary stimuli in terms of past memory percepts. As Bellak states it: "we are compelled to assume that all present perception is influenced by past perception, and that indeed the nature of the perceptions and their interaction with each other constitutes the field of the psychology of personality." (6)

Bellak has recognized the problem and has emphasized the term "apperception" which he defines as "an organism's (dynamically) meaningful interpretation of a perception." (6) He offers the hypothesis that "there can be a hypothetical process of noninterpreted perception and that every subjective interpretation constitutes a dynamically meaningful apperceptive distortion." He then goes on to define various degrees of apperceptive distortion of which projection is one.

There seems to be a growing trend, in the literature, to recognize the fact that there are many different entities commonly characterized as projection, and that projective techniques as we know them now seem to measure varying amounts of these different kinds of projections in varying situations. These also imply that, to meet the needs of this type of test, the individual calls upon many other characteristic modes of expression and response, as well as true projection. (1, 5, 6, 7, 10, 16, 17, 33, 39) It appears

then, that there is a great need for stricter, more carefully defined, terminology in this area, and also for more experimental studies to determine just what modes of adjustment the individual calls upon under varying circumstances.

In applying this discussion to our present problem, it appears that there is no one generally accepted theory that would present an adequate rationale for a test such as the CAT. It is proposed that, by the use of normative data, more accurate interpretations of tests, such as the CAT may be obtained, and thereby make research attempts at understanding this problem more valuable.[1]

Except when discussing projection as a defense mechanism, in the discussions to follow the term apperception will be used. If, however, projection is used by any author the study will follow his style. This does not imply that Bellak's theory is accepted fully, but only that it appears to be the best and most complete theory available at present.

B. Apperceptive Techniques

1. Early Apperceptive Techniques for Use with Children

a) The Thematic Apperception Test

The Thematic Apperception Test is classified as a projective technique, but a great deal more than psychoanalytic projection is elicited on this test. The TAT is greatly in need of more research to provide a specific theoretical foundation as discussed previously.

The third revision of the TAT consists of thirty-one cards marked so that there is a set of twenty cards for boys, girls, males over fourteen and females over fourteen. There are in the set three

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1. A further discussion on the use of normative data can be found on page 16.

pictures specifically designated for boys and girls, seven for Boys and Males and seven for Girls and Females. These, with the ten pictures used for both sexes and all ages make up the original cards for use with children four to fourteen. (32)

b) Results of Several Investigations Using the TAT with Children

Schafer and Leitch administered the tests to twenty-two three, four and five-year olds in a nursery school situation where children were admitted chiefly from broken homes or where the mother was working. (36) The Children were ranked on adjustment-maladjustment and the authors found the following indicaters of maladjustment: "accumulation of unusual violently aggressive themes, blocking, and absurd perceptual distortions."

In another study by Schafer and Leitch, this time with five to seventeen-year olds with a mean age of eleven years, a comparison was made between psychotic and maladjusted nonpsychotic children on the first ten cards of the TAT. (31) The stories were interpreted in terms of organization, emotion, and perception and the authors were able to differentiate the psychotic from the nonpsychotic group on the basis of disturbances in the areas mentioned.

Bell reports that Sanford [2] has analyzed TAT stories told by fifty-two children in the age group five to fifteen according to a scheme of needs and general traits or attributes as developed by Murray. (4) Sanford then correlated these findings and found twenty syndromes of needs and traits which, while not mutually exclusive, proved to be useful constructs for comparing interrelations between

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2. R. Sanford, "Personality Patterns in School Children," in R. Barker, J. Kounin, and H. Wright, Child Behavior and Development, N.Y., McGraw-Hill, 1943.

the personality, physical factors of the organism, and environmental conditions.

Cox and Sargent gave the ten TAT cards to fifteen "stable" and fifteen "disturbed" seventh grade boys and scored their stories using a modified version of Murray's system. (18) They found that there were certain objectively measurable differences existing between the groups. They further found that experienced clinicians were not able to spot the well adjusted children because of certain preconceptions (or frames of reference) in the clinicians' minds. They therefore emphasized the value of normative data for all age groups and both sexes, keeping in mind intelligence and socio-economic factors.

Rotter reports an unpublished study by Gerver[3] who administered the TAT to fifty five to ten year old children. (35) The four pictures (7GF, 18GF, 3GF and 8GF) which produced the highest percentage of interpretation (as contrasted to refusals, enumerations, or descriptions) were pictures characterized as containing real people with whom the subjects could easily identify. The four pictures most often failing to produce interpretation (19, 18BM, 11 and 12BG) lacked human figures and had an element of bizarreness, unfamiliarity or both. The study also indicated that failure to produce interpretations for more than half the pictures might be an expectancy below eight years of age.

Various other studies are reported in the literature including research by Des Lauriers and Halpern in which the TAT was administered to children with schizophrenia before and after shock treatment. (19)

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3 J. Gerver, "Level of Interpretation of Children on the Thematic Apperception Test", (unpublished M. A. thesis), Ohio State University, 1946. This thesis was not available for reading at the time of writing.

Wells reports research conducted with delinquents and nondelinquents using the TAT (41) and Sarason[4] has used the test with mentally deficient children.[5]

Many clinicians felt, however, that the TAT was not a suitable instrument for investigation of children's apperceptions because it was structured more on the adult level of response. The majority of pictures portray adults acting in an adult situation and leave little room for children to identify, and there is little chance for apperception to occur. This seems to be especially true for younger children.

c) Apperceptive methods developed for child study, 1940-45.

Some of the earliest techniques developed for use with children involved the modification of the TAT by including other pictures specifically designed for use with children. In a study with neurotic children, Balken and Van der Veer[6] administered a set of twelve pictures using some TAT pictures (avoiding those that suggested death, murder, suicide or erotic fantasies), articles and magazine illustrations on child care and pictures taken from the scrapbooks of children previously under psychiatric treatment. They report, among other things, that in children younger than ten years of age the fantasies are more apt to be of a "forced" type, and that the immediate spontaneous responses are likely to be fragmentary enumerations or partial descriptions of some phases of the picture. (2, 3) The final pro -

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[4] S. Sarason, "The Use of the Thematic Apperception Test with Mentally Deficient Children, L.A. Study of High School Girls", Amer. J. Ment. Def., 7:414-421, 1943. This article was not available in the University of Alberta Library and is reported from Bell. (4)

[5] The literature does not report what TAT cards were used in these studies.

[6] E. Balken and A. Vander Veer, "The Clinical Application of a Test of Imagination to Neurotic Children," Amer. J. Orthopsychiat., 12:68-80, 1942. This particular article describing the test was not available in the University of Alberta Library, and necessary information has been obtained from Bell. (4)

ductions (after further stimulation) were still fragmentary and repetitions of previous descriptions and enumerations were only occasionally interspersed with material of dynamic significance. The material, for the most part, was shadowy and unattached to definite objects, people or situations.

Amen[7] studied individual differences in apperceptive reaction of preschool children on fifteen cards depicting "experiences and interests" of preschool children. The study revealed definite trends in apperceptive reaction. The younger children tended to respond in terms of static form, concrete and literal interpretation, and a primitive unanalyzed whole. With age the responses tended to include activity, even inner activity, involving thoughts and feelings, and tended also to be in terms of the whole picture with more attention to details. Self identification and the projective tendency itself was evident.

In a study by Temple and Amen[8] on anxiety reactions in young children, the experimental material consisted of a series of twelve pictures depicting situations familiar to the young child. The cards were quite ambiguous in that they could be interpreted either as a boy or girl and the face was left blank. Two separate heads were drawn for each figure, one with a happy expression and one with a sad expression, and the child was asked to select one of these to complete the central figure. The technique revealed different anxiety areas in the experience of young children, with a close relationship between behavioral adjustment

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7. E. Amen, "Individual differences in Apperceptive Reaction: A Study of Responses of PreSchool Children to Pictures", Gent. Psychol. Monogr., 23: 319-385, 1941. The original article was not available in the University of Alberta Library and the material has been taken from the abstracts.
8. R. Temple & E. Amen, "A Study of Anxiety Reactions in Young Children by Means of a Projective Technique", Genet. Psychol. Monogr., 30:61-113, 1944. The original article was not available in the University of Alberta Library, and the information has been obtained from the abstract and from Bell. (4)

and patterns of anxiety. They also suggest the value of a normative study of anxiety in the interpretation of individual differences.

In response to a series of pictures of fairly complex material administered by Vernon to children seven to thirteen years old, he found that, by the age of seven, the normal child gives simple descriptions of pictures, which as age increases, gradually become fuller. (40) These descriptions in later years include actions and emotions in what he calls "partial interpretation". He found that it was not until the child was eleven or older that he was fully able to understand and interpret the picture as a whole.

2. Later Developments in Apperceptive Techniques: 1945-1950

a) A Comparison of a Set of Animal Pictures and TAT Productions

A new set of cards was developed by Bills on the basis that the TAT was not suitable for young children because of the length of the story told, amount of description, and blocking on the test as a whole or on individual cards. (11) Bills took a series of pictures of rabbits from a children's story book and compared the amount of material obtained with that obtained on the TAT. The preliminary work was promising but many of the children recognized the pictures and told stories resembling the original story. To combat this a new series of ten color cards described as "animals engaged in various activities" was designed, and administered to forty-eight school children, ages five to ten. Results of this experiment showed that the animal pictures surpassed the TAT on the basis of quantity of material produced, ease of formulation of stories, coherency and lessening of blocking.

Bills, Leman, and Thomas further used the qualitative aspect of the test as compared to interviews and TAT scored on twenty-six of the needs proposed by Murray. (12) Their results showed that the TAT, animal stories and interview material were in partial agreement and that it was reasonable to conclude that the study substantiates the claim that animal pictures and TAT are sound instruments for revealing manifest needs of children. They conclude that the animal cards are as valid and useful as the TAT and present an easier situation for projection of needs. They suggest, however, that the present set of cards is not suitable to investigate specific areas of adjustment.

It would seem from the results of these two studies that the animal stories give the child an easier opportunity for expressing his needs in story form. Moreover, that the quantity of material produced by them is significantly greater than the TAT (though not yet of sufficient quantity to be clinically useful in that the authors have set a criterion of two hundred words for clinically useful stories). The stories on the animal cards are more coherent and there is less blocking; but the present cards are not suitable for the investigation of specific areas of disturbance in children.

b) The Children's Apperception Test

The Children's Apperception Test was specifically designed by Bellak to appeal to children. (8, 9) While apparently not based on the study discussed above, this work appears to fulfil their recommendations rather well.

The rationale for the CAT was first suggested to Bellak by Kris, a psychoanalyst and educator. The task then was to design situations

which would have bearing on the dynamics of children's adjustment. Animals were used in the pictures on the basis that they might be preferred identification figures from three years up to possibly ten. The choice of animal identification figures has a further advantage in that it makes reasonable the administration of this test to children of other cultural groups.

Eighteen pictures were drawn by a professional illustrator of children's books, Violet Lamont, some according to the suggestions of the authors and some according to her own ideas. The pictures, some of a "somewhat anthropomorphized nature and some entirely in animal fashion", (9) were then photostated. The number of cards was further reduced to ten on the basis of study of the records and the experience of other psychologists who had worked with children.

The pictures give children the opportunity to respond to many of the problem areas with which they may come into contact in our culture.

> The pictures were designed with the hope of eliciting responses to: feeding problems specifically, and oral problems generally; to problems of sibling rivalry; to illuminate the attitude toward parental figures and the way in which these figures are apperceived; to learn about the child's relationship to the parents as a couple - technically spoken of as the oedipal complex and its culmination in the primal scene: namely, the child's fantasies about seeing the parents in bed together. Related to this, we wish to elicit the child's fantasies around aggression; acceptance by the adult world, and its fear of being lonely at night with a possible relation to masturbation, toilet behavior and the parents's response to it. We wish to learn about the child's structure and his dynamic method of reaction to - and handling of - its problems of growth." (9)

Typical responses are given in the manual on the basis of one hundred cases.

c) The Michigan Picture Test

Another study of interest is that by Hartwell and associates on the Michigan Picture Test, which was developed to investigate and measure the emotional reactions of children of ages eight to fourteen years, at which time many find it difficult to verbalize their problems. (24) Initially nearly one thousand assorted pictures were administered to subjects in this age range. The number was then reduced to twenty plus a blank card. These were then divided into a series of twelve cards each, four being common to both sets. The pictures were selected according to a carefully selected criterion, administered to three hundred and three Michigan school children, and a careful normative study was made. Final results of the project unfortunately are not yet available but information on several areas of importance have been established. (E.g., ability to distinguish well and poorly adjusted children.)

Holt suggests that the area of overlapping on the Michigan Picture Test and CAT is only partial and that the two tests seem more to supplement each other in that the CAT depends on animals for identification figures and hence is probably more useful with younger children. (26) The Michigan Picture Test, using children for identification figures, will probably have more application with older children.

d) The Blacky Test

Mention should also be made of another test involving animals - Blum's Blacky Test. (13) This test, originally designed for adults, involves twelve cards drawn in caricature, depicting the adventures of a dog named Blacky. The pictures are designed to portray "either a

stage of psychosexual development or a type of object relationship within that development", including oral eroticism and sadism, anal sadism, oedipal intensity, masturbation guilt, castration anxiety (males) and penis envy (females). Blum administered the Blacky test (which he calls a modified projective technique) to one hundred and nineteen male and ninety female students in elementary psychology classes. He then used his data to study the psychoanalytic theory of psychosexual development.

Blum points out that animal figures are used to facilitate personal expression in situations where human figures might be inhibiting. Michal-Smith and associates have, however, found the Blacky Cartoons to be even more productive with children than with adults because of the ease with which the child can identify with the animal figure. (30)

e) Story Completion Method

Mention should also be made of the story completion method which is also related to the picture story test in that, although the stimulus-picture or incomplete story is different, the response-story is similar and it is quite possible that many of the same personality factors are at work in both instances. (31)

C. Normative Material

1. Normative Studies

In the manual for the CAT information on "typical responses" based on one hundred cases covering the total age group has been included. To date this is the only published information with regard

to response-expectancy. It is reported that there are several research studies in progress on the normative aspects of the test.[9] As far as can be ascertained there are no studies completed or in progress on the common stories of preschool children.[10]

However, using a somewhat comparable approach, Peters and Bellak are completing a study concerned with the development of a detailed scheme of apperceptive norms for the CAT using the technique used by Rosenzweig and Fleming for their study of the TAT.[11]

2. The Need for Normative Data

The need for normative data centres around the clinician's inability to make an accurate diagnosis unless he has available a formal set of norms. Several authors have suggested that clinicians form their own set of subjective norms, but, besides the fact that the clinician must have several years of clinical experience to build up a backlog of cases for subjective evaluation, there is also the disadvantage that, because of the absence of explicit formulation, these norms are difficult to judge with any degree of objectivity. Added to this is the limited knowledge of differences due to sex, age, intelligence, socio-economic and cultural variables and others which may influence the responses.

Cox and Sargent report an experiment in which the TAT profiles of fifteen well adjusted children were submitted to experienced clinicians who were asked to rate the profiles as "stable" or

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9. In a personal communication from Dr. Leopold Bellak, we received a "partial list of research, in current progress and/or completed, with the CAT". It is not clear from the titles of these projects whether or not they pertain to the work of this thesis. For the reader's information they have been listed in a separate bibliographical sheet entitled "Research on the CAT in Current Progress and/or Completed".
10. Somewhat similar work has been done with respect to the TAT. See Kiefer (28), Stein (37), Rosensweig (34), and Rapaport (33).
11. Unfortunately this study was not available at the time of writing.

"disturbed". (18) The results showed a significant error in rating the children and the authors'attempt to explain this in terms of "frame of reference" based on pathological subjects. In other words, most of the material available on the TAT is on pathological groups and hence the clinician sets up his own standards in which he expects normal subjects to be at the opposite pole in many of their elements.

Rosenzwieg points out that there are fundamentally two types of norms required in most projective methods and that for the TAT these may be designated as "apperceptive" and "thematic". (34) Apperceptive norms are stimulus oriented and refer to the descriptive statements made by the subject about the stimulus material. They enable the clinician to determine the degree of a subject's participation in group modes of behavior and also the responses which are deviant from the group and reveal the individual personality characteristics. They thus serve for both inter-individual comparisons and intra-individual comparison. Thematic norms are subject oriented and are concerned with the repetitions and the patterning of the whole record and involve the personality trends that consistently characterize the subjects in the group.

There are certain cautions in the use of these apperceptive norms which must be noted in making interpretations. The similarity between individual and group may represent chance agreement of the group with the individual. To decide between chance agreement and true or significant agreement it is necessary to analyze the total configuration of agreements and disagreements, i.e., the thematic norms. Furthermore, in interpreting common behavior the psychological significance of the common element for the group must be realized. It is a question of whether that

activity is psychologically neutral or has underlying psychological significance for the group. In order to determine whether the psychological determinant of the group applies to the individual, it is necessary to rely on the thematic norms. In order not to abuse apperceptive norms it is necessary to realize the interdependence of apperceptive and thematic norms.

Normative material, in acquainting the clinician with the material to be obtained from the test, further enables the clinician to select cards to investigate specific problem areas, or, if time is a problem, to cut down the number of cards and select those which, on the basis of this normative material, will prove most useful.

Kiefer (28) points out a further use for normative studies in research on reliability and validity. Her conclusions rest on the fact that the normative material allows for a more accurate interpretation, and this in turn yields results with higher validity and more reliability.

Chapter III

SELECTION OF SUBJECTS AND METHODS OF ADMINISTRATION

A. Selection of Subjects

All the subjects in this study were, at the time of testing, students at the Edmonton College Kindergarten.[1] The subjects were not "screened" inasmuch as all the available students within the age range three years zero months to five years eleven and a half months were used as subjects. There was a fairly large turnover in attendance at the kindergarten during the time testing was in progress (January-March, 1952) and as a result all the children were not tested. However, all those who remained long enough to fit into the testing schedule were used.

Upon consultation with the Lady Principal,[2] it was decided that there was no immediate need to inform the parents as to the nature of the study. It was of such a nature that it could be included as one of the preschool functions. In addition the child was persuaded to feel that the testing was a part of the program.

It was originally planned to set up three age groups - five-year olds, four-year olds, and three-year olds, and then combine these to give the norms for the total nursery school group. Unfortunately, there were very few three-year olds attending the school, so the original idea was abandoned but the three-year olds obtainable were tested and

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1. Edmonton College Kindergarten, Inc., 9942-48, 106 St., Edmonton, Alberta.
2. Mrs. A. L. Elston

included in the total nursery school group. Although the three-year olds have been left out of the theoretical discussions of this project, they are listed in the tables to show how the final total (i.e., the total nursery school group) was obtained.

On further surveying the material obtained, it was found that sex distribution was unequal but that the five-year old group was large enough so that it could be split into two groups and then combined to give the total five-year old group. All information, then, will be given for three age groups (three, four and five-year olds) and the total nursery school group. The five-year old group will be further sub-divided into boys and girls.

Tables I and II, below, show the sex distribution by ages and the mean age for each group.

Table I

Age and Sex of Subjects[3]

	Group 1 (Age 5)			Group 2 (Age 4)	Group 3 (Age 3)	Total Nursery Group
	Boys	Girls	Total			
Boys	18	--	18	14	2	34
Girls	--	12	12	1	3	16
Total No. in Group	18	12	30	15	5	50

Table II

Mean Age of Subjects
(in years, months, and days)

	Group 1			Group 2	Group 3	Total Nursery Group
	Boys	Girls	Total			
No. in group	18	12	30	15	5	50
Mean age	5/5/15	5/5/16	5/5/15	4/5/16/	3/5/6	4/11/14

[3]It is to be noted that there are two sets of siblings in the total group. Twin girls appear in the five-year old group and a brother and sister in the five-year old and three-year old groups respectively.

The mean age of all groups averages slightly over the five-year level, but because of the greater number of five-year olds in the total group, the mean for the total group (five, four and three-year olds) is four years, eleven months and fourteen days or nearly five years.

Because contact had not been made with the parents, and qualitative interpretations of individual tests were not given, a letter and questionnaire were sent to the parents by the Lady Principal requesting information for the Kindergarten files. (Appendix A) It was planned to use this information in an attempt to determine the type of group for which normal stories were being established, since in using normative data, it is necessary to match the subject being tested with certain variables (e.g., age, sex, socio-economic background, etc.).

Points covered in the questionnaire which were intended to give an idea of the type of subjects used in this study included the following: marital relationship, economic aspect of home situation (whether the mother or father or both were working), number of siblings and their ages, and religious affiliation. Unfortunately only eighteen of the questionnaires were returned, but the Lady Principal was able to supply information on marital status and economic aspect of the home situation for fifteen more subjects. This brought the total in these two categories to thirty-three. The following Tables (Tables III, IV and V) indicate the returns on the questionnaires by age groups, and summarize the information obtained on marital status and economic aspect of the home situation for the thirty-three cases.

Table III

Subject Information

	Group 1			Group 2	Group 3	Total Group
	Boys	Girls	Total			
Questionnaires returned	4	3	7	7	1	15
Information by Lady Principal	7	3	10	5	3	18
Total	11	6	17	12	4	33

Table IV

Marital Status

	Group 1			Group 2	Group 3	Total Group
	Boys	Girls	Total			
[4] M & F living together	8	6	14	10	4	28
M & F separated	1		1	1		2
One parent deceased	1 (F)		1	1 (M)		2
Guardian	1		1			1
Total	11	6	17	12	4	33

Table V

Economic Aspect of Home Situation

	Group 1			Group 2	Group 3	Total Group
	Boys	Girls	Total			
[4] Father working (and living at home)	8	6	14	10	4	28
[4] Mother or guardian working	6	5	11	10	3	23
Mother Housewife	5	1	6	1	1	9

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[4]Here again the two groups of siblings enter into the tabulations (See Footnote 3, Page 20). In the tables above the information has been tabulated for each child and would appear as from four different families, rather than two.

It is to be noted that, while the rest of the subjects (some seventeen) can not be specifically judged on the percentages obtained so far, since the total returns would be based on fifty cases, the obtained information suggests that there is an abnormally high percentage of working mothers.

B. Method of Administration

1. Difficulties of Administering a Test to Young Children

The difficulties inherent in testing young children, particularly preschool children, are adequately summarized in Ford. (20) These include the ease with which distraction occurs, and the frequency with which young children tire of a task which requires continued attention to one type of material. The sensitiveness of the child to the adult with whom he is working, and the difficulty for a stranger to establish rapport; the idiosyncracies of childhood behavior through which a child reveals himself to those who know him but which are unintelligible to strangers; the language hazard, particularly in tests which deal with the subject's ability to verbalize.

Ford further points out the advantages of working with children. If the child knows and respects the examiner and the examiner knows and understands children rapport is easily established. The child's life is less structured, less inhibited, less concerned with cultural norms than that of the adult and he thus expresses himself more freely and revealingly in rapport with the adult. Especially does this appear to be true when the child accepts the adult and where he is not outwardly challenged to competition. Other investigators report similar problems. (14), (15), (22).

2. The Testing Situation

Keeping in mind these specific difficulties in testing young children, the testing situation was constructed in the following manner to maximize the advantages and minimize the disadvantages.[5]

Prior to the actual administration of any tests, the examiner worked and played with the children in the kindergarten atmosphere. The examiner also assisted teachers with the regular functions of the kindergarten, taking an active part in story telling and games. All of these activities in which the examiner participated were with the group as a whole. Individual child relationships were avoided in the attempt to prevent certain attitudes from developing.

No particular effort was made on the part of the examiner to get to know the new children as they entered the school, for it was felt that this would mean singling out the child for special attention. It appeared, however, that once the examiner was accepted by the children as a group, the new children soon accepted the group's feelings and were anxious for their turn.

During the test, the subjects were seated at a low table with the subject sitting at the examiner's right. As the table was larger than the ordinary children's table, it allowed the examiner to be close enough to the child to observe him, and yet the child was not unduly distracted by the examiner's presence. Both the subject and examiner

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[5] Some very helpful practice was obtained prior to the administration of tests to the experimental group by testing a different play school group involving 12 children, mostly 5 year olds. Here various instructions were tried out and the method of inquiry investigated (i.e. inquiry at the end of ten cards or after the 5th and 10th cards). The results of these investigations appear in the main text as the instructions and method of inquiry that were used with the experimental group. This play school group was under the direction of Mrs. D. E. Smith

were seated on small chairs, thus giving additional comfort and familiarity to the child.

Tests were given in the living room of the Lady Principal and were preceded by several days by a Draw-a-Man[6] test administered by the same examiner, in the test room. With the younger children (three-year olds), the Draw-a-man was administered to two children at a time, thus allowing them to become accustomed to the test room but not at the expense of divorcing them from everything that was familiar. This was not felt to be necessary with four and five-year olds and they were tested singly.

Although there were occasional interruptions while the test was in progress, the examiner tried to minimize the intrusion by not presenting new material until the disturbance was over. It was felt that, although they were distracting, the interruptions did not influence the rapport.

3. Time of Testing

The kindergarten is operated mainly on a day school basis but there are a number of pupils living right at the school. Day school pupils fall into three groups: (a) those attending in the mornings (9:30 -- 11:30 a.m.); (b) those attending in the afternoons (1:30-3:30 p.m.); and (c) those attending all day. Day School children are also in attendance all day. The time of the child's attendance, therefore, set the limits as to when he could be tested. Testing was carried out from 9:30 to 10:30 a.m. and from 1:30 to 4:30 p.m. Those attending in the morning were tested in the morning and those attending

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[6] The test administered was Goodenough's Draw-A-Man (23)

in the afternoon were tested then. Furthermore, there were facilities at the school for the younger children to take a nap in the afternoon and it was necessary to test the three-year old children in the morning. The pupils attending all day were worked into the testing schedule in both the morning and afternoon.

4. Test Materials

In all cases the material was prepared beforehand. Pencils, paper, stop watch and CAT cards were ready for use and table and chairs were in place.

5. Preliminary Administration - the Draw-a-Man

As mentioned above the Draw-a-Man was administered to the children singly (four and five-year olds) and in pairs(three-year olds) to acquaint the child with the examiner and the testing situation.[7]

The child or children were brought into the testing room and seated at the small table. The examiner started off by explaining to the children that whenever they came to the testing room they would play a game. Two pencils were on the table in front of the child - a big Jumbo sized children's pencil and an ordinary pencil. As the instructions were given, a piece of paper was handed to the child and he was allowed to place it in the manner desired. The following instructions were given:

"Now today I want you to take a piece of paper and a pencil - you may take whichever kind of pencil you like, and Draw a Man for me."

If the child hesitated the instructions to draw a man were repeated. If he asked what kind of man he was told any kind of man

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[7] Unfortunately time has not allowed the analysis of these drawings which, with the stories, would make a very interesting study.

he wanted. If the child insisted he could not draw a man he was asked to try. In all cases the child was encouraged (non-directively) with the drawing and liberal amounts of praise were given.

In only one instance did a child refuse to draw a man, and he complied with instructions on a second date a week later. (The same child after overcoming his initial fear was very willing to do the CAT.)

At the conclusion of the drawing of a man, the children were told that the examiner would like to have them come back to the testing room at a date to be specified by the examiner, when they would play another kind of game. All children, without exception, were willing and eager to come back a second time.

6. Administration of the CAT

On entering the room for the administration of the CAT the child was seated and the Draw-a-Man made on the previous occasion was presented and the child complimented on the drawing. The following instructions were then given:

"Today we are going to play a story telling game. I am going to show you some pictures (at this point the pictures were drawn out from the folder and held in the examiner's hand with the back of the pictures toward the child) and I want you to make up a story about these pictures. Describe what is happening now. Tell about the thoughts and feelings. Tell how the story started and how it will end."

The first picture was then presented to the child and the examiner timed the various elements[8] and copied down the story.

At the conclusion of the first story the examiner stated,

"that was a very good story. Remember I want to know what is happening now, the thoughts and feelings, how the story started and how it will end."

The child was then presented with the second card.

The remaining eight cards were handed to the child one at a time

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8 See page following for time elements.

with the instructions, "Now tell me a story for this picture".

7. Inquiry on the CAT

At the conclusion of the ten cards, the examiner commented: "Now those were all very good stories but this time I would like to go through the cards again and ask you some questions about them."

The examiner then placed the appropriate card in front of the child, reviewed the story the child had given for the picture and asked for any of the elements omitted, i.e. past, present, future thoughts and feelings. Questions were asked in the following order and manner. Present: If the child had described the picture he was asked, "What are they doing now in the picture?" If the past was omitted, he was asked, "What happened before this -- what was the beginning of the story?" Questioning for the future was, "What happened after that, what was the end of the story?" For thoughts, "What are they thinking about in their minds?" and for feelings, "What are their feelings, how do they feel about it all?"

The word "they" was used in instructions and inquiry in place of the word "animals" because it was found in the initial trial tests that in some cases the identification was so complete that the child resented the word animal and/or that it interrupted the flow of material when he realized it was animals for whom he was structuring a story.

8. Recording

Of the several methods of recording -- typewriter, hidden microphone[9] and handwriting, the last was chosen. The low tone in

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9 Hartwell et al report losses as high as 30% of statistics electrically recorded due to mechanical difficulties. (24)

which many of the children talked, the novelty of the situation and the distractibility ruled out all but the last possibility. The handwriting method, too, had its drawbacks in that it was not possible to record verbatim in a few cases,[10] but it is felt that the main ideas were recorded in the manner given by the child and that it is only the statistics on length of story (i.e., number of words) that have suffered. Again it is felt that even this can be approximated fairly accurately.

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[10] Such words as "a", "the", "and" etc. were the main omissions.

Chapter IV

METHOD OF ANALYSIS

A. Analysis of Formal Characteristics

There are, in general, two methods of dealing with the imaginative productions elicited on a test such as the TAT or CAT. The first method is by analysis of the formal characteristics, i.e., analyzing the data for significant elements. The second method is content analysis, where the meanings that are attributed to the data are ascertained. Both methods are dependent on the same story material and are closely related. Various methods of interpretation have been developed emphasizing either the formal aspects or content analysis or the relationship of both methods. (4, 7, 8, 9, 10, 26, 28, 32, 33, 35, 37, 38).

For this study, it was decided to analyze the stories for their formal characteristics. This has been done for two reasons: (a) in interpreting stories, the clinician must first consider the analytic aspects and then interpret them in relation to his particular subject; (b) this thesis deals with normative material, implying that elements are to be abstracted from stories and their frequency determined. Thus in considering the formal characteristics, we have set the stage, so to speak, for the content analysis. Furthermore, in charting the frequency of these elements we have further refined the possible area of interpretation.

This study, then, will attempt to abstract the formal characteristics of story structure and story content in the form of

elements which can then be tabulated by statistical procedures to gain a frequency count and differentiate the common from the uncommon elements. The common elements will then be pulled together to give the common stories for our groups of nursery school children.

The terms "characteristics of story structure" and "characteristics of story content" are the same as used by Rapaport (33) but they will be used in a slightly different context here.

Characteristics of story structure will deal with the subject's manner of reacting to the stimuli (pictures) together with the product of that reaction: the structure and content of the story itself. This method, in that it involves evaluation by the examiner of the subject's response and story, is necessarily somewhat subjective. However, the various characteristics have been defined as exactly as possible in the attempt to eliminate subjectivity.

Characteristics of story content will be concerned strictly with the abstraction of the various elements from the story production, and the operation here is on a fairly objective level.

B. The Method

The method of analysis for formal characteristics finally decided upon is as follows:

I. Subject Identification

II. Time Elements and Story Length

1. Reaction Time
2. Total Time
3. Story Time
4. Story Length

III. Characteristics of Story Structure

1. Approach: rejects, hesitates, accepts.
2. Flow of Expression: very constricted, constricted, natural, free, very free.
3. Type of Story: narrative, explanation, description.
4. Organization: confused, loose, somewhat organized, organized.
5. Spontaneous Elaboration: old, new, mixed.
6. Realism: reality influenced, reality free, mixed.
7. Mood

IV. Characteristics of Story Content

1. Individual elements within the story
   a) Setting
   b) Situation
   c) Main hero
   d) Others
   e) Description of Characters
   f) Figures and Objects Introduced
   g) Figures and Objects Omitted

2. Individual Elements of the Story
   a) Past
   b) Present
   c) Future
   d) Thoughts
   e) Feelings
   f) Theme summary

C. Description of Categories and Sub-categories

I. Subject Identification

The productions of the subjects in the various age groups were numbered in the following manner: Group 1, Age 5, were numbered in Arabic numbers from 1 to 30; Group 2, age 4 were lettered in capital letters A to O; Group 3, age 3 were numbered in Roman Numberal I to V.

II. Time Elements and Story Length

1. Reaction Time: the length of time in seconds from the presentation of the card until the story is commenced.

2. Total Time: the length of time in seconds from the presentation of the card to the completion of the production. This interval includes

all pauses, periods of questioning by the subject, and answering by the examiner.

3. Story Time: the total time in seconds taken to tell the story, i.e., total time minus reaction time.

4. Story Length: the number of words contained in the story, including inquiries by the subject.

III. Characteristic of Story Structure

1. Approach Approach to the problem is a product of reaction time, story length and elements of the story. Sub-categories are:

a) Rejects: the subject refuses the card altogether or fails to see the animal in the picture.

b) Hesitant: there are two possibilities here (i) a long reaction time, usually with much preliminary questioning as to what "it" is, or (ii) fairly short reaction time but very little material (number of words) given over a lengthy story time.

c) Accepts: there are three possibilities here, a short reaction time with (i) a short story length, but with definite elements included, (ii) average story length but only a general description, (iii) a complete story.

2. Flow of expression This category is a product of the story length and the individual elements of the story. Both the main story and inquiry were scored for this category. Sub-categories are as follows:

a) Very Constricted: the story length is very short (or even zero) and there are no elements of story content included in just a general description of the card.

b) Constricted: the story length is short but at least one of the individual elements of the story is included.

c) Natural: the story length is average and takes the form of elaboration of one element or several simple elements.

d) Free: the story length is above average with two or more elements elaborated.

e) Very Free: the response is given as a complete story and usually contains past, present and future with a good amount of elaboration.

3. Type of Story This category refers to the type of "story" given in response to the instructions. Results are on a continuum from a narrative giving all or nearly all of the story elements to a simple description of the card. There are three main sub-categories with several divisions under this heading:

a) Narrative: this category entails a logical sequence of events taking place for the picture.

b) Explanation: an explanation is given of what is happening in the picture. There are two sub-categories here, (i) simple explanation where the explanation indicates what is happening right now in the picture, but nothing else; (ii) complex explanation tells what is happening now in the picture and either explains why it is happening or what the logical consequences will be.

c) Description: the child simply describes or enumerates what he sees in the picture. This description can take three forms, (i) description or enumeration of objects in the picture, (ii) description or enumeration of characters and (iii) mixed, a combination of these with the child enumerating or describing both characters and objects.

4. Organization This implies the child's ability to construct a logical story. It is scored on two levels, the first indicating the child's ability to tell a story as a result of the instructions only. The second indicates the child's ability to tell a story with prompting, i.e., the main story and inquiry are scored as one unit. There are four sub-categories:

a) Confused: the story in itself is confused, irrelevant, illogical, or fantastic data are included. This category could not be scored too consistently as what seems illogical to the adult may have great meaning to the child (e.g., the mouse eats the lion on card 3). Therefore, only when the child changed the main stream of his thought radically or was confused within himself was this category scored.

b) Loose: there are two possibilities for scoring this sub-category. (i) The minor illogical elements are included in the production, but the general thread of the story is still intact. (ii) The story or description is accurate but it is too short to actually deserve being called a "story".

c) Somewhat organized: a fairly logical sequence of events but the story is not quite complete.

d) Organized: a logical sequence of events telling a fairly complete story.

5. Spontaneous Elaboration When the child starts to verbalize on the story elements upon presentation of the card for the inquiry and/or upon the reading of his story by the examiner before any questions have been asked in the inquiry for that card, we have what

is called here spontaneous elaboration. The child spontaneously verbalizes on the card without stimulation to do so by the examiner. This verbalization can take several forms.

a) Old Material: information already given in the main story is (i) repeated with none of the elements changed or (Ii) extended with the material essentially the same as in the main story, but doubts may be erased or one aspect changed (e.g. settling on the sex of the "person").

b) New Material: material which had not been included in the main story is given. The two divisions here are (i) lengthy when several new elements are added spontaneously and (ii) short when only one new element is added.

c) Mixed: old material may be repeated or extended and some new material added.

6. Realism The extent to which the animals conform to the standards of reality, i.e., act like human beings. Sub-categories include:

a) Reality influenced: the animals act entirely as human beings would act in a similar situation.

b) Reality Free: only animal-like behavior is shown in the story.

c) Mixed elements of both human and animal behavior appear in the story.

7. Mood This is the general emotional tone of the production as a whole and depends on the outcome of the story and thoughts and feelings where these are included in the story. Sub-categories here are as follows:

a) Happy: this mood is related to the accomplishment of the goal, with its accompanying feelings of achievement or pleasure.

b) Neutral: this indicates an uneventful sequence of events.

c) Unhappy: an event or act harming the hero, or the hero harming someone else.

d) Tragic: this is more serious than unhappy and involves the death of the hero or someone else.

IV. Characteristics of Story Content

1. Individual Elements Within the Story

a) Setting: this includes the time, the place and the weather conditions which the picture suggests to the subject as the background of the story.

b) Situation: the subject's interpretation of the activity depicted in the card. This is usually a one-word abstraction of the present.

c) Main hero: the hero is the person or persons (animal) with whom the subject primarily identifies. He is the one whose point of view is adopted in the story, who shares the subject's sentiments and aim, whose reactions are most dramatically described and whose inner feelings and motives are portrayed.

d) Others: other people or animals appearing in the pictures, or introduced by the subject, with whom the main hero interacts.

e) Description of Characters: this includes the kind of animal seen, his place in the family, and an approximation of his age (e.g., "little" or "big").

f) Figures or Objects Introduced: figures or objects which do

not appear in the picture but which the subject introduces into the picture.

g) Figures or Objects Omitted: figures or objects appearing in the story which the subject fails to include in the story or which are not seen by the subject.

2. Individual Elements of the Story

a) Past: this is the action which has happened before the situation depicted in the picture, of which the situation is the resultant.

b) Present: this is essentially the same as the situation but is a more complete description of the interaction of forces depicted in the picture.

c) Future: in the logical sequence of events the future will follow the action depicted in the picture, and should contain the outcome of the story.

d) Thoughts: the mental functioning of the hero as he interprets or reacts to the situation.

e) Feelings: the emotional reactions of the hero as he reacts to the situation.

f) Theme: the theme is essentially an abstraction of the past, present and future and is a resultant of the hero's reaction to the situation and the other characters in the story.

D. Application of the Method

1. Description of the Analysis Sheet and Method of Tabulation

An analysis sheet[1] was drawn up with the appropriate headings across the top and the subject's identification data in the first

[1] See pp. 43a for a sample of the analysis sheet used in this study.

column on the left hand side of the page. A separate sheet was used for each group, for each card. This allowed analysis on both the vertical and horizontal planes. Reading across the horizontal plane, it is possible to obtain the summary for a complete picture for the individual. This could further be extended to reading the summaries for the single individual on ten cards, thus allowing a thematic summary for the ten pictures. On the vertical plane may be obtained a summarized statement of the individual elements or characteristics for a complete group of subjects for each picture.

The stories were then separated into the three age groups, with the five-year olds further subdivided into boys and girls. The method of analysis adopted entailed analyzing the stories for each subgroup, one card at a time. Thus the fifty stories in the total group were analyzed for each card separately. It was thought that this method would give a greater consistency in handling the various elements and their relation to the card and story than if the stories had been analyzed for the ten cards by one subject at a time, or even by one group.

As the number of stories analyzed for each card increased, so too did the familiarity with the material, and the ease of extracting elements and spotting descriptions that might prove significant. To ensure greater consistency, the stories, after once being analyzed for the ten cards, were then re-read card by card and any elements omitted or neglected were inserted.

2. Actual Tabulation

Subject Identification. This information was tabulated in the left hand column of the paper.

Time elements and Story Length. Reaction time and total time were transcribed directly from the record to the appropriate columns on the analysis sheet. Story time was obtained by subtracting reaction time from the total time. Story length was estimated as accurately as possible by counting the number of words in the production and estimating for "linking" words that had been omitted. (E.g., "and","or", "but", "as", etc.)

Characteristics of Story Structure. These elements were estimated as closely as possible from the correspondence of the story to one of the definitions in the category, and a check (v) put in the appropriate column. Where two elements were scored (i.e., on flow of expression where the main story and the inquiry are scored and organization where the main story and story plus inquiry are scored) results of the story alone were scored in black and inquiry or story and inquiry were scored in red. Unfortunately, it was not possible to define objectively the number of words or the time interval to be considered short, medium or long, because of the interdependence of the number of variables considered. These categories were retained in the final analysis, even though they are fairly subjective ratings, because it was felt they offer information that could not be obtained in any objective manner.

Characteristics of Story Content. As far as possible a single word has been charted in the various categories here. However, in some cases, there appeared to be two elements of equal importance to the subject and these have been charted as a double response. (E.g., Card 8, situation drinking-talking.)

Individual Elements of the Story. These elements were transcribed as nearly as possible in the subject's own words. Some abstracting was done, but in most cases the actual words were recorded.

3. Tabulation For Common Elements of Story Structure and Content

The manner of tabulating story structure allowed for a simple addition of the elements to give the final total for the various subcategories. Tabulation sheets were next drawn up for each element of the story content with the age categories across the top. In the left hand column the statements made by the individuals were entered and as the analysis sheet was worked through, similar statements made by individuals in the different age groups could be tabulated and brought together. The next step was to bring those elements with the same ideational content, but which were expressed somewhat differently, together. This set the way for the determination of the frequency of common elements.

4. Determination of Frequency of Common Elements

This topic is defined as a study of "common stories" and it is therefore necessary to determine what percentage of the sample group, and consequently of the total population, might be judged significant as related to the common response. In other words, it is neeessary to determine a percentage above which responses may be termed "common" and below which they are non-significant for a study of common stories.

Roserzweig uses a 20% level of frequency to determine apperceptive norms on the basis that this criterion is in "substantial agreement with the general practice for 'popular' responses in the Rorschach method." (34a)

In another approach, Kiefer selected the 10% level in the sample group, which, using the probability graph of 95% confidence limits as employed in a binomial distribution, yields a 5% significant level in the total population. (28) She points out that basic to the selection of a level of significance is the consideration of the group with which one is working. Moreover she justified selection of the 10% level on the basis that her cases were very carefully selected and that by screening procedures she had selected a more nearly homogeneous group of subjects within the normal range.

Unfortunately, subject information on the present sample group is limited. As far as could be ascertained, none of our subjects was under psychiatric guidance at the time of testing, but there was evidence that one had been receiving attention previously. With these aspects in mind, it was decided to base the common stories on elements at the 20% level of significance, but to include the 10% level of significance in the tabulations as a further indication of what might be expected on the test. Both levels of significance have, therefore, been included in the tabulations.

Using the 20% level of significance in our nursery school group and using the probability graph "95% confidence limits of a binomial distribution",[2] it is observed that the sample group yields a 10% significant level in the total population, i.e., total nursery school population.[3] (42) Having thus defined the level of significance at the 20% level in our total nursery school group, the frequency of significance can be given for the various age groups (Table VI). Frequencies

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[2] Appreciation is due Mr. A. Shaw, Department of Mathematics, University of Alberta, for his suggestions regarding the use of this probability graph.

[3] It is to be noted that many of the elements reach a frequency greater than the 20% level and these would then occur above the 10% level in the total population.

falling below these levels of significance are defined as unusual or non-significant, and those falling above these levels as significant, and they will be used for the compilation of common stories.

Table VI

Significant Frequency of Occurrence of Common Elements

	Group 1			Group 2	Group 3	Total Nurs. Group
	Boys	Girls	Total			
Significant Frequency	3.6	2.4	6.0	3.0	1.0	10.0
Frequency to be significant in this study	4.0	3.0	6.0	3.0		10.0

As mentioned earlier, both the 10% and 20% level of frequency will be given, but only those of 20% or more will be used to compile the common stories. All frequencies will be tabulated for each of the three main groups and for the subgroups to indicate how the total was obtained. However, to aid in the use of the table, all frequencies that reach the criterion for common elements (i.e., 20% level) will be underlined.

SAMPLE ANALYSIS SHEET*

| TIME ELEMENTS | | | | CHARACTERISTICS OF STORY STRUCTURE | | | | | | | | | | | | | | | | | | | | CHARACTERISTICS OF STORY CONTENT | | | | | | | | | | | | | | | | | | |

Chapter V

THE RESULTS

A. Revision of Analysis Sheet for Tabulation Purposes

1. Outline

The application of the method of analysis described in the last chapter has resulted in three types of information.

a) The mean and standard deviation have been obtained for the time elements and for story length.

b) Characteristics of story structure have been tabulated and results significant at the 20% level have been underlined.

c) Characteristics of story content have been tabulated on frequency tables for both the 10% and 20% level of significance and those at the 20% level have been underlined.

Some slight changes have been made from that of the outline presented in the last chapter. It is therefore necessary at this point to present an outline for the data actually tabulated.

I. Time Elements and Story Length

1. Reaction Time
2. Total time
3. Story time
4. Total administration time
5. Story length

II. Characteristics of Story Structure

1. Approach
2. Flow of expression
3. Type of story
4. Organization
5. Spontaneous Elaboration
6. Realism
7. Mood

III. Characteristics of Story Content

1. Setting and description
2. Situation and description
3. Main Hero
4. Others
5. Description of characters
6. Figures and objects introduced
7. Figures and objects omitted
8. Past
9. Future

2. Reasons for Changes in Outline

As testing progressed, it was realized that the "total time" for the ten cards would not give an adequate idea of the average period of administration. To try to remedy this, the total administration time was recorded as closely as possible from the time the instructions were given for the CAT until the inquiry had been completed on card 10.

The two categories under characteristics of story content have been combined, in that they will be used in this form for the compilation of common stories. Description has been added to setting and situation, when necessary, in order to give a more complete idea of the elements used by the child. For example, if the furniture in the room seems to be an element of the story, it has been tabulated under setting. If there were various elements that seemed important but secondary to the main action, these have been tabulated under description of the situation.

Four elements have been omitted from characteristics of story content. Present and theme summary are omitted because it is felt they are adequately covered by other elements in the tabulation.

(Present is covered by situation and description of the situation while all the elements together combine to give the theme summary.) There is a great lack of understanding and confusion of thoughts and feelings even with adult subjects, leading to omissions and rejections. (28) With children the problem is even greater, and besides omissions and rejections are found perseveration and a continuation or amplification of the future. In few cases do the elements of thoughts and feelings relate to the actual story. For these practical reasons, then, these elements have been omitted from our present study.

3. "Omitted" and "Others"

Single ideas, or ideas which did not reach the 10% level of significance, are grouped together in the tables under the term others. Items omitted or rejected are classified together under the heading omitted. These categories, although seemingly meaningless, serve to give a better idea of the child's response to the pictures. The first shows the degree of variation in the single area and the second indicates the aspects of the picture which do not elicit responses or which create difficulty in response. Furthermore, these categories are necessary to compute the individual totals for each group (equal to the number in the group) and the nursery school total of fifty.

B. Time Elements and Story Length

The following discussion will concern the time elements and story length. All times, except Total Administration time, are recorded in seconds. The story length is in words per story. For each element the range, mean and standard deviation is tabulated, with the mean and standard deviation taken to the second decimal.

Table VII provides data on reaction time for all the groups on the individual cards. Table XI summarizes this information for each group for the ten cards. The only significant figure is that showing a longer reaction time for all groups on the first card. This would indicate the initial "shock-reaction"[1] or the initial difficulty the subjects felt on being presented with the pictures. Group 2 shows a higher mean reaction time on the total cards and also the greatest range in reaction time. In explaining this, it may be possible that,as the subjects grow older, they find it easier to adjust to new problems.

Table VIII shows the total time similarly arranged for the ten cards and Table XII shows the total obtained for each group summarizing the ten cards. It is apparent that the longest total time is given on Card I, which is probably the result of the prolonged reaction time and initial adjustment to the testing situation. Group 2 shows the shortest total time and also the greatest range in total time. Comparing this with the results found on reaction time,

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[1] The term "shock-reaction" is used to indicate ego disorganization. In this sense it may possibly be compared with "color shock" as employed by Klopfer and Kelly. Klopfer, B. & D. Kelley, The Rorschach Techniques, N.Y., The World Book Co., 1946, p. 385

where Group 2 showed the highest reaction time, it would appear possible that age may again be a factor and that the subject's ability to express increases (within limits) with age.

Table IX gives the story time, the total time taken to tell the story, for each group on each card. Table XIII gives the story time for each group on the ten cards. From these it is seen that Group 1 gave the shortest story time on Card 1, while Group 2 gave the shortest time on Card 10. Group 1 appears to have found the initial adjustment situation most difficult, and to have recovered from the"shock-reation" on succeeding cards. Card 10 seems to have had a definite inhibitory effect on Group 2. The mean for the ten cards shows Group 2 to have averaged the shortest time for the 10 cards, again pointing out the possibility of an age factor influencing the adjustment to the situation.

Table XIV shows the total administration time for the groups in minutes. While the story time (Table XIII) averages 41.74 seconds per card, the total time for the test averages 41.83 minutes. Adding several seconds per card for the extra time it took to complete writing the stories after the story time was obtained, and for the presentation of the next card, it can be estimated that it took approximately ten to fifteen minutes to administer the cards. Thus the inquiry consumed approximately twenty-five minutes. This is an indication of the duration and probable importance of the inquiry.

Table X indicates the story length in words tabulated for each card. Table XV summarizes this information for the various

groups for ten cards. From these it can be seen that Group 1 and the Total Group told the shortest stories on Card 1, again indicating the difficulty the children had adjusting to the problem and the recovery, notably in Group 1, from the "shock-reaction". Group 1 also averaged the the longest stories on the cards and had the greatest range in story length. It is to be noted here that Bills has set 200 words as the criterion for a story to be clinically significant. (11) Using this criterion, very few stories in this study would approach clinical significance. However, it is to be noted that the inquiry, on the whole, was of greater length than the original story (except in the case of narratives) and also brought forth many more story elements. The number of words in the inquiry has not been tabulated because it is felt that this would also give an erroneous impression; inasmuch as most of the subjects included several new ideas, there was usually a repetition of the main story as well. This would seem to indicate the necessity of other criteria considering the inquiry for evaluating the clinical significance of the story.

In summary, Group 1 shows the shortest reaction time, longest total time and correspondingly greater story time, with a greater story length. This would seem to indicate that there is a definite age influence on time elements and story length. (These findings are also born out by the results of Group 3, but as mentioned previously, the group is too small as a basis for final conclusions.) The duration of the inquiry also indicates the probable importance of this aspect.

Table VII
REACTION TIME

Group I - 5 years									Group 2 - 4 years (N = 15)			Group 3 - 3 years (N = 5)			Total Preschool Group (N = 50)		
Boys (N = 18)			Girls (N = 12)			Total (N = 30)											
Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.
4 - 205	36.78	48.30	2 - 155	44.83	36.02	2 - 205	38.07	45.06	2 - 310	39.87	77.41	*2 - 110	52.33	44.40	*2 - 310	39.52	57.24
1 - 25	6.22	6.50	1 - 51	12.25	17.43	1 - 51	8.63	12.07	1 - 130	12.67	31.59	2 - 7	3.4	1.96	1 - 130	9.32	19.86
1 - 27	5.89	6.40	1 - 30	7.42	7.20	1 - 30	6.50	6.77	1 - 55	9.13	13.42	2 - 17	6.4	5.39	1- 55	7.28	9.27
1 - 25	6.33	6.10	2 - 29	8.16	7.81	1- 29	7.07	6.87	3 - 30	10.66	7.75	3 - 12	4.8	3.65	1 - 30	7.92	12.54
2 - 13	4.89	2.86	2 - 30	7.5	7.98	2 - 30	5.93	5.67	2 - 10	4.87	2.62	3 - 6	4.4	1.02	2 - 30	5.46	4.67
1 - 15	5.78	4.26	1 - 7	4.0	1.82	1 - 15	5.07	3.60	1 - 25	6.47	5.52	2 - 20	6.8	6.68	1 - 25	5.66	4.68
1 - 25	4.78	5.61	1 - 22	5.91	6.14	1 - 25	5.23	5.85	1 - 40	5.67	9.41	2 - 8	3.6	2.25	1 - 40	5.20	6.93
1 - 6	2.83	1.42	1 - 25	5.5	6.14	1 - 25	3.90	4.24	1 - 40	7.8	10.30	1 - 8	3.8	2.71	1 - 40	5.06	6.82
1 - 7	3.33	1.38	1 - 10	4.16	2.42	1 - 10	3.67	1.84	2 - 75	10.6	17.78	2 - 5	3.4	1.02	1 - 75	5.72	10.35
1 - 7	3.06	1.74	1 - 18	4.50	4.44	1 - 18	3.63	3.20	1 - 60	7.47	14.31	1 - 2	1.8	0.4	1 - 60	4.6	14.36

Table VIII
TOTAL TIME

25 - 215	72.61	46.35	30 - 255	84.42	59.94	25 - 255	77.33	52.59	10 - 355	80.93	81.55	*20 - 192	107.33	70.25	*10 - 355	80.33	64.52
7 - 278	58.66	71.44	10 - 152	51.58	40.14	7 - 278	55.83	60.98	9 - 180	67.73	54.62	12 - 48	30.2	11.67	7 - 278	56.84	56.98
5 - 240	50.56	59.50	10 - 191	54.08	45.77	5 - 240	51.97	59.91	7 - 140	42.73	31.43	19 - 40	27.2	9.81	5 - 240	46.72	147.99
7 - 125	50.22	33.44	16 - 177	60.66	42.72	7 - 177	51.40	37.77	7 -187	59.66	42.45	16 - 50	31.2	13.17	7 -187	53.66	38.36
7 - 285	58.94	67.37	7 - 138	53.0	42.42	7 - 285	56.56	58.75	12 - 145	47.47	32.68	14 - 66	31.4	18.48	7 - 285	51.32	49.86
7 - 200	50.39	51.07	6 - 206	52.17	57.83	6 - 206	51.10	53.89	10 - 77	37.27	16.93	12 - 27	21.2	5.31	6 - 206	43.96	43.89
5 - 162	58.67	46.92	5 - 84	44.17	27.82	5 - 162	52.86	41.02	7 - 140	43.67	33.98	24 - 89	39.2	25.06	5 -162	48.74	38.01
5 -165	48.11	42.03	7 - 80	44.08	24.88	5 - 165	46.50	36.21	10 - 160	48.2	35.27	21 - 35	27.20	5.34	5 - 165	45.08	34.62
6 - 137	43.27	34.65	5 - 114	45.33	36.83	5 - 137	44.10	35.54	7 - 230	48.33	50.73	12 - 25	21.0	4.86	5 - 230	43.06	39.88
7 - 174	53.72	49.10	6 - 111	44.08	36.44	6 - 174	49.87	44.70	5 - 107	33.2	23.37	24 - 53	35.2	10.53	5 - 174	43.4	37.91

Table IX
STORY TIME

5 - 110	35.83	30.56	9 - 105	44.83	35.89	5 - 110	39.27	33.11	9 - 98	41.07	20.00	*18 - 82	55.00	27.07	*5 - 110	40.81	29.31
4 - 269	52.44	71.65	5 - 134	39.33	43.65	4 - 269	47.2	62.32	6 - 169	55.07	45.76	10 - 46	26.8	11.86	4 - 269	47.52	55.07
3 - 235	44.67	58.21	6 - 188	46.6	46.53	3 - 235	45.47	53.83	2 - 139	33.6	31.14	8 - 38	20.8	12.25	2 -135	39.44	45.95
4 - 108	43.89	10.20	7 - 175	52.50	45.88	4 - 175	47.33	39.02	4 - 157	49.0	37.83	13 - 38	26.4	9.09	4 - 175	47.74	37.33
3 - 277	54.06	66.42	2 - 136	45.5	44.09	2 - 277	50.63	58.68	9 - 140	42.60	32.18	11 - 60	27.0	17.52	2 - 277	45.86	49.59
4 - 193	44.61	50.44	5 - 203	48.17	58.18	4 - 203	46.03	53.70	4 - 54	30.80	19.04	5 - 25	14.4	7.09	4 - 203	38.30	44.20
3 - 161	53.89	48.28	4 - 81	38.25	29.44	3 - 161	47.63	42.48	5 - 136	38.0	34.29	17 - 86	35.6	25.54	3 - 161	43.54	39.06
3 - 162	45.27	41.66	6 - 77	38.58	26.24	3 - 162	42.60	36.43	9 - 145	40.4	32.91	18 - 31	23.4	4.92	3 - 162	40.02	33.99
3 - 132	39.94	34.42	4 - 136	41.17	36.13	3 - 136	40.43	35.12	4 - 155	37.73	34.57	8 - 22	17.6	5.08	3 - 155	37.34	33.75
2 - 172	50.67	49.08	5 - 136	39.58	37.21	2 - 172	46.23	45.05	3 - 47	25.73	13.65	22 - 51	33.4	10.37	2 - 172	38.8	37.03

Table X
STORY LENGTH

1 - 120	23.5	28.24	3 - 108	34.25	33.98	1 - 120	27.80	31.11	7 - 54	25.13	12.30	*10 - 44	24.67	14.26	*1 - 120	27.77	25.82
6 - 318	59.00	86.07	7 - 228	46.42	64.07	6 - 318	53.97	78.26	6 - 213	44.73	53.51	14 - 37	21.8	7.99	6 - 318	47.98	68.07
3 - 184	36	49.29	3 - 191	46.91	48.63	3 - 184	40.37	49.31	6 - 85	27.2	21.66	13 - 39	19.2	10.08	3 - 184	34.30	40.86
8 - 135	41.17	33.93	8 - 177	50.83	46.58	8 - 177	45.03	39.82	4 - 135	33.87	29.80	12 - 38	25.4	9.41	4 - 177	39.76	35.64
6 - 378	52.06	86.34	3 - 146	44.67	45.44	3 - 378	49.10	72.88	8 - 57	35.27	28.82	14 - 40	25.0	9.63	3 - 378	42.54	58.47
4 - 170	37.78	46.83	5 - 327	52.17	87.24	4 - 327	43.53	66.41	3 - 75	24.6	20.80	5 - 25	19.4	8. 40	3 - 327	35.44	53.69
8 - 129	46.56	38.03	2 - 130	38.33	35.60	2 - 130	42.27	37.29	5 - 129	31.6	29.77	14 - 69	28.4	20.63	2 - 130	38.38	34.36
5 - 180	38.83	42.48	9 - 115	43.83	32.24	5 - 180	40.83	38.79	6 - 93	30.33	21.61	16 - 28	22.8	4.17	5 - 180	35.88	32.96
9 - 120	32.89	28.30	6 - 160	49.5	52.18	6 - 160	39.53	40.50	8 - 144	31.67	32.45	12 - 30	20.2	6.27	6 - 160	35.24	36.63
7 - 149	38.28	40.07	7 - 125	38.08	35.78	7 - 149	38.20	38.42	3 - 60	20.67	14.63	23 - 46	33.0	7.62	3 - 149	32.42	31.89

* Group 3 , N - 5 , Total Group, n - 48

Table XI

Reaction Time (in seconds)

Group	N	Range	Mean	S.D.
I	300	1 - 205	8.77	18.32
Boys	180	1 - 205	7.99	18.58
Girls	120	1 - 155	9.94	17.93
II	150	1 - 310	11.52	29.92
III	48	1 - 110	7.27	16.48
Total Group	498	1 - 310	9.45	71.67

Table XII

Total Time (in seconds)

Group	N	Range	Mean	S.D.
I	300	5 - 285	54.05	76.60
Boys	180	5 - 285	54.52	90.83
Girls	120	5 - 255	53.36	44.37
II	150	5 - 355	50.92	46.04
III	48	12 - 192	34.18	29.23
Total Group	498	5 - 355	51.19	64.78

Table XIII

Story Time (in seconds)

Group	N	Range	Mean	S.D.
I	300	2 - 277	45.28	47.15
Boys	180	2 - 277	46.53	50.51
Girls	120	2 - 203	43.42	41.52
II	150	2 - 169	39.40	32.53
III	48	5 - 86	26.92	17.27
Total Group	498	2 - 277	41.74	41.64

Table XIV

Total Administration Time (in minutes)

Group	N	Range	Mean	S.D.
I	27	17 - 75	41.44	15.02
Boys	16	17 - 70	41.25	12.71
Girls	11	19 - 75	41.73	17.82
II	15	20 - 75	44.00	15.45
III	4	30 - 55	36.25	10.83
Total Group	46	17 - 75	41.83	16.97

Table XV

Story Length

Group	N	Range	Mean	S.D.
I	300	1 - 378	42.16	52.23
Boys	180	1 - 378	40.61	54.59
Girls	120	2 - 327	44.50	51.09
II	150	3 - 213	30.51	29.43
III	48	5 - 69	24.00	11.31
Total Group	498	1 - 378	36.90	44.29

C. Characteristics of Story Structure, Content and Common Stories

This section will be arranged in the following manner: a discussion will be outlined on each of the three sections of story structure, story content and common stories, then the actual tabulations for story structure, content and the common stories will follow. The data will be arranged so that the complete material for one card will appear together. To aid in the understanding and evaluation of the stories in relation to the cards, the description of the picture-card taken from the test manual will precede the section on that card.

Before considering the various story elements, it is interesting to point out that rejections of the cards occurred in only two cases. In both instances this was on Card 1 in the three year old group and there was a recovery on the inquiry (in one case a spontaneous elaboration after the fourth card had been presented). The inquiry was rejected on twelve occasions and almost exclusively by Groups 2 and 3. This would again suggest the influence of age on the ability to cope with the situation.

1. Characteristics of Story Structure

These elements, as mentioned previously, are fairly subjective evaluations, but they have been included here because it is felt they will give information that could not be obtained by any other means and which will be of value in structuring the common stories. It is to be noted that a complete tabulation has been made, i.e., elements have been included even if they have not reached the required frequency. This has been done to facilitate comparison between various

elements on different cards. However, for convenience, elements significant at the 20% level have been underlined.

a) Approach. Accepts is the elements of greatest significance on approach to the problem. On only one card, Card 1, is hesitant greater than accepts. Hesitant is significant on Cards 1, 2, 3, and 10 and rejects does not reach the significant level on any cards. This would seem to indicate that, after the first "shock-reaction", most of the children are able to adjust to the situation.

b) Flow of Expression. In general the main stories are constricted and improve to the level of natural, free or very free in the inquiry. The main story reaches significance on very constricted only on Card 10, probably indicating some inhibitory effect of this card. On only three cards does the main story reach significance on natural. Neither free nor very free is significant, apparently.

The inquiry does not reach significance on very constricted and only reaches this level on constricted on cards 2 and 3. Both natural and free reach statistical significance on every card.

These findings would appear to indicate that an increase in the flow of expression is brought forth with the inquiry and would tend to emphasize the value of that technique.

c) Type. Stories are predominantly simple explanation. The only other elements reaching significance are complex explanation on Card 9, descriptions of characters on Card 6, and mixed description on Card 10. This would seem to confirm the difficulty of Byrd[2],

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[2]Personal communication, January 1952.

another investigator with the CAT, who had difficulty trying to get children to tell a story in the full sense of the word.

d) Organization. The main stories are predominantly loose with at least 30 of the 50 stories being scored in this category on every card. The material only reaches statistical significance on somewhat organized three times (Cards 4, 9, 10) and on organized once (Card 2).

The story plus inquiry reaches statistical significance on somewhat organized on every card and on organized on eight cards (all except 5 and 8). They are loose only once (Card 5) but are also confused on four occasions (5, 6, 7 and 8).

These findings would again indicate the significance of the inquiry in bringing about a better organized story. However, it is also apparent that more confused stories were obtained with the inquiry.

e) Spontaneous Elaboration. None of the elements under spontaneous elaboration reach statistical significance but it has been retained to indicate the cards that produce this type of information with the greatest frequency (cards 4 and 7).

f) Realism. The action in the stories is predominantly human action and is significant on nine cards (not on card 7). Animal action is significant on two cards (Cards 6 and 7) and mixed on four cards (1, 3, 6 and 7). The decision to use human or animal associations seems to be in the card as a stimulus, and appears to be governed by whether or not the animals are seen in a human situation or setting. However, this boundary is not rigid as can be seen from the over lapping on the data sheets for these elements.

The above findings would definitely seem to bear out the supposition that animals serve as easy life-situation identification figures for children (8, 9, 11, 12).

g) Mood. The predominant moods are neutral and unhappy. Neutral is significant eight times (not card 3 or 7) and unhappy nine times (not on card 1). Happy is significant only once (Card 4) and tragic is significant twice (Cards 3 and 7). This would seem to confirm the findings of other investigators who have found a great many aggressive themes (both unhappy and tragic in this study) in children's stories. (36)

2. Characteristics of Story Content

As mentioned previously, elements reaching both the 10% level of frequency have been tabulated, and to aid those using the data, the 20% level of frequency has been underlined.

a) Setting. This element has not been included in the stories, too consistantly, but does appear on five cards (Cards 1, 2, 4, 5 and 10).

b) Situation. This element usually allows categorization fairly specifically of what was happening on the card but in several instances this action was depicted in the past or future (notably Cards 7, 9 and 10).

c) Main Hero. There was great difficulty in scoring this category as the children seemed to identify with each animal as they were mentioned in the story. This would possibly indicate a somewhat plastic concept of 'self' which allows many identifications. Generally, the children identified with the group as a whole or with the member of the group approximately the same age as themselves.

d) Others. This category was mainly concerned with the mother and father and aggressive figures (figures in the pictures or introduced). Secondary identification showed up here to a great extent by the children's identification with those nearest their own age if primary identification had been with the group.

e) Description of characters. Although a significant number of children saw the animal in the picture as what the artist had drawn it to represent, a great many called it by other names. However, this proved no hindrance to identification, for if the child did not know the animal in the picture, he usually substituted the name of one he did know.

f) Figures or Objects Introduced. A great many figures, both human and animal, were introduced into the stories. The fact that a figure was not on the card proved no drawback to the child. Some objects were introduced but on the whole this category was not significant.

g) Figures or Objects Omitted. Some figures were significantly omitted but these appeared to be the ones that were not too easily distinguished. Further investigation will be needed to determine the significance of both figures and objects omitted.

h) Past. The most significant feature of the past was that it was omitted on an average of 42.8% of the time for all cards, with a range of 28% to 52%.[2] Explanation for this might be found in the child's inability to understand the test instructions or it might be the result of the child's own inadequate background of past experience.

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[2] This feature is significant for all age groups, but particularly so for Groups 2 and 3 where it averages 59%.

i) Future. Only four cards reached a significant frequency for omissions on the future (Cards 2, 4, 8 and 10). This may possibly be one of the advantages that animal cards have over TAT pictures. Cox and Sargent, in this respect, found that "nearly half (of the stories)were in this category (without endings) suggests that children quite commonly overlook the instructions to state the outcome and find it difficult to resolve a plot". (18)[3] However, the methods of administration in the study by Cox and Sargent may quite possibly differ from those used here and this, then, would not be a general conclusion.

The only theme running through the future elements is that of aggression (it is to be noted that this does not always reach a statistical frequency). This may indicate the child's helplessness or lack of foresight with regard to his environment. In many cases the "aggressor" is not specified[4] (e.g. appears as: someone, something, etc.) and would seem to indicate a free floating apprehension.

3. Common Stories

The common stories to follow this discussion are the final fulfillment of this thesis topic. The prose account is formulated on the basis of statistical tabulations for the total preschool group.

Unfortunately the selection of the 20% level has not resulted in an overwhelming abundance of elements. Particularly under the categories of past and future has it been difficult to find significant elements. However, it is considered more valuable here, to have one story at a higher statistical frequency than to have several at a lower frequency and thereby sacrifice validity.

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3 See report of the study by Cox and Sargent, p. 8 supra

4 Balken and Vander Veer also found material of this type. See the report of their study on p. 9 supra.

D. Results

Card 1 Description: Chicks seated around a table on which is a large bowl of food. Off to one side is a large chicken, dimly outlined.

A. Elements of Story Structure

(M = Main Story A = Inquiry or Story Plus Inquiry)	Group 1 Boys M	Boys A	Girls M	Girls A	Total M	Total A	Group 2 M	Group 2 A	Group 3 M	Group 3 A	Total Group M	Total Group A
a) Approach												
Rejects	-		-				-		2		2	
Hesitant	12		8		20		11		2		33	
Accepts	6		4		10		4		1		15	
b) Flow of Expression												
Very constricted	2	2	1	-	3	2	4	-	-	-	7	2
Constricted	12	3	7	1	19	4	9	2	2	3	30	9
Natural	2	7	2	7	4	14	2	10	-	2	6	26
Free	1	5	-	4	1	9	-	1	1	-	2	10
Very free	1	-	2	-	3	-	-	-	-	-	3	-
Card rejected	-		-		-		-		2		2	
Inquiry rejected		1		-		1		1		-	-	2
c) Type												
Narrative	2		4		6		-		1		7	
Explan.: simple	14		5		19		8		2		29	
complex	1		1		2		3		-		5	
Desc: Characters	1		1		2		2		-		4	
Objects	-		-		-		0		-		-	
Mixed	-		1		1		2		-		3	
Card rejected	-				-		-		2		2	
d) Organization												
Confused	3	1	-	-	3	1	2	2	1	1	5	4
Loose	11	3	8	1	19	4	11	-	1	1	31	5
Somewhat organized	2	8	1	5	3	13	2	10	1	2	6	25
Organized	2	5	3	6	5	11	-	1	2	1	6	13
Card rejected	-		-		-		-		2	-	2	
Inquiry rejected		1		-		1				2		3
e) Spontaneous Elab.												
Old: Repeated	-		-		-		-		-		-	
Extended	-		-		-		-		-		-	
New: Lengthy	-		1		1		1		1		3	
Brief	-		-		-		1		-		1	
Mixed	-		-		-		-		-		-	
f) Realism												
Human	11		7		18		11		4		33	
Animal	-		2		2		-		-		2	
Mixed	7		3		10		4		1		15	
g) Mood												
Happy	1		-		1		1		-		2	
Neutral	8		8		16		8		4		28	
Unhappy	5		2		7		1		1		9	
Tragic	3		1		4		3		-		7	
Mixed	1		1		2		2		-		4	

Card 1.

B. Elements of Story Content

	Group 1 Boys	Group 1 Girls	Group 1 Total	Group 2	Group 3	Total Group
a) Setting						
Time of..(eg. supper)	5	3	8	2	2	12
Others		2	2		1	
Further Description						
What they are eating	2	2	4	9	2	15
Table	3		3	3		6
b) Situation						
Eating	14	11	25	12	4	41
Others	4	1	5	3	1	9
c) Hero (Main)						
Chicks	12	12	24	13	5	43
Large chicken	5		5	2		7
Fig. Introduced	1					
d) Others						
Large chicken	10	9	19	11	4	35
Chicks	4	2	6	2		8
Figs. Introduced	3	2	5	2		7
e) Description of Char.						
Chicks: They	4	8	12	3	1	16
Chickens	6	1	7	2	2	11
Birds	1	1	2	4	1	7
little or baby	7	2	9	5		1 3
Large Chicken: Rooster	5	4	9	4	1	14
chicken	4		4	5		9
Hen	6	2	8	1		9
f) Fig. or Obj. Intro.						
Animals	2	2	4	2		6
Humans	1		1			1
Objects		1	1			1
g) Fig. or Object Omit.						
Large Chicken	3	3	6	2	1	9
h) Past						
Omitted	8	3	11	7	3	21
Large C. prepares food	6	5	11	1		12
Others	4	4	8	7	2	17
i) Future						
Omitted	4		4	2		6
Chicken eats Chicks	3		3	3		6
Chicks go out to play	1	3	4	1	1	6
Clear away and/or wash dishes	2	1	3	2		5
Chicken eats food on chicks	2	2	4		1	5
Others	6	6	12	7	3	22

Card 1.

C. Common Story

The Approach to the stories on this card is predominantly hesitant, but a significant number accept the situation. The Flow of Expression is characteristically constricted in the main story but improves to natural in the inquiry. Simple explanations are the predominant Type. Organization of the main story is loose but becomes somewhat organized, or organized with the addition of the inquiry. Most of the stories are based on human actions but a significant number are mixed (i.e., animal and human actions). The predominant mood is neutral.

The Setting is concerned with the meal time and a further description concerns what the animals are eating. The main hero is usually the Chicks which are seen as 'they' , or 'chickens' and described as 'little' or'baby'. "Others" in the story is the Large Chicken seen as a 'rooster'.

The past is omitted 42% of the time or is concerned with the 'Large Chicken preparing food for the little Chicks'. Although no one element is significant in the future, an element of 'aggression' (Chicken aggressive to Chicks) could be formed by considering the data for both Chicken eats Chicks and Chicken eats food of Chicks.

Card 2. Description: One bear pulling a rope on one side while another bear and a baby bear pull on the other side.

A. Elements of Story Structure

	Group 1 Boys		Group 1 Girls		Group 1 Total		Group 2		Group 3		Total Group	
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects		0		0		0		1		0		1
Hesitant		4		2		6		4		0		10
Accepts		14		10		24		10		5		39
b) Flow of Expression												
Very constricted	0	-	0	-	0	-	2	2	0		2	2
Constricted	11	2	6	1	17	3	7	4	5	3	29	10
Natural	5	9	4	2	9	11	3	4		1	12	16
Free	0	7	0	7	0	14	2	4		1	2	19
Very free	2	-	2	2	4	2	1	1			5	3
c) Type												
Narrative	2		2		4		3				7	
Explanation: Simple	13		8		21		8		5		34	
Complex	3		2		5		2				7	
Descrip: Character							1				1	
Objects							1				1	
Mixed												
d) Organization												
Confused		3				3		2				5
Loose	10	-	6		16		10	1	5	1	31	2
Somewhat organized	3	4	3	4	6	8	3	7		4	9	19
Organized	5	11	3	8	8	19	2	4			10	23
Inquiry rejected	-	-	-	-	-	-		1				1
e) Spontaneous Elab.												
Old: Repeated												
Extended												
New: Lengthy												
Brief	3				3		1		1		5	
Mixed												
f) Realism												
Human	15		12		27		13		5		45	
Animal												
Mixed	3				3		2				5	
g) Mood												
Happy			4		4		1		-		5	
Neutral	3		3		6		7		3		16	
Unhappy	9		5		14		6		1		21	
Tragic	4				4		1		-		5	
Mixed	2				2				1		3	

Card 2.

B. Elements of Story Content

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
a) Setting						
Hill or mountain	5	3	8	2	1	11
Outside	1	2	3	2		5
Others	6	1	7			7
b) Situation						
Pulling	17	11	28	13	4	45
Others	1	1	2	2	1	5
Further desc. sitt.						
Rope	15	9	24	10	5	39
String	1	2	3	3	1	7
Up	4	1	5	2		7
Playing	2	3	5	1		6
Fighting	3		3	1		4
c) Main Hero						
Three bears	14	10	24	12	5	41
Baby bear	3	1	4	3		7
Others	1	1	2			2
d) Others						
Baby Bear	8	7	15	4	2	21
One big bear (father)	8	7	15	4	2	21
One big bear (mother)	8	7	15	4	2	21
One big bear (definite desc. eg. big or black)	5	2	7	5	2	14
2 big bears (they etc.)	2	1	3	4	1	8
Figs. introduced	4	3	7	7		14
e) Desc. of Characters						
Three bears: bears they or specific animals	7	4	11	10	1	22
	5	4	9		4	13
#"three bears"	2	2	4	2		6
Baby bear: baby bear	11	8	19	6	2	27
f) Fig. or Obj. Introd.						
*Human	4	3	7	7		14
**Objects	4	5	9	5	1	15
h) Past						
Omitted	6	3	9	11	2	22
Look for and/or found rope	2	3	5		1	6
One bear fell	2	1	3	1	1	5
Others	8	5	13	3	1	17
Comment: It is to be noted that if the main identification is with the three bears, secondary identification is usually with the baby bear. Significant secondary identification is as follows:						
Baby bear helping	4	4	8			8
Concern over size or strength of baby	1	1	2	2	1	5
# The "three bears" from the fairy story of "The Three Bears"						
* Goldilocks	2	2	4	2		6
** House of the "three bears	2	2	4	2		6

	Group 1			Group	Group	Total
	Boys	Girls	Total	2	3	Group
i) Future						
Omitted	2	1	3	3		6
One or all bears fall	3	4	7	2	2	11
Go down hill or home	2	2	4	1		5
Others	11	5	16	9	3	28

C. Common Story

The Approach for most of the stories on this card is on the level of accepts, but a significant number are hesitant. The Flow of Expression for the main story is constricted or natural with the inquiry free, natural or constricted. Simple explanation are the predominant Type of story. Organization for the main story is loose, or organized while the story and inquiry are organized or somewhat organized. The level of realism is human. Mood is unhappy or neutral.

The Setting is a 'hill or mountain' with the Situation 'pulling' with further description of what they are pulling a 'rope'. The Main Hero is the Three Bears seen as 'bears' or some other specific animal. Others include the Baby Bear seen as'baby bear' and the big bears seen as father, mother, or some other definite description (eg. big bear). A significant number of figures are introduced under others.

Past is omitted 44% of the time and no other category reaches significance. Future action depicts 'one or all of the bears falling down'.

Card 3. Description: A lion with a pipe and cane, sitting in a hole. in the lower right corner a little mouse appears in a hole.

A. Elements of Story Structure

	Group 1						Group 2		Group 3		Total Group	
	Boys		Girls		Total							
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects												
Hesitant	6		1		7		4		2		13	
Accepts	12		11		23		11		3		37	
b) Flow of Expression												
Very constricted	2	1	0	0	2	1	1	1	1	2	4	4
Constricted	12	5	3	1	15	6	10	4	4	3	29	13
Natural	2	3	7	5	9	8	3	3			12	11
Free	0	9	1	4	1	13	1	7	0		2	20
Very free	2		1	2	3	2					3	2
c) Type												
Narrative	2		1		3		2				5	
Explanation: Simple	11		8		19		9		4		32	
Complex	2		3		5		2				7	
Description: character	2		0		2		1		1		4	
Objects	1		0		1		1				2	
d) Organization												
Confused	1	2	0		1	2	4	1			5	3
Loose	12	2	5		17	2	10	2	5	2	32	6
Somewhat confused	2	8	6	4	8	12	1	8		3	9	23
Organized	3	6	1	8	4	14	0	4			4	18
e) Spontaneous Elab.												
Old: Repeated	1				1		1				2	
Extended							1				1	
New: Lengthy							1		1		2	
Brief	1		1		2		1				3	
Mixed												
f) Realism												
Human	12		9		21		12		5		38	
Animal												
Mixed	6		3		9		3				12	
g) Mood												
Happy							1				1	
Neutral	5		3		8		6		4		18	
Unhappy	4		2		6		5		1		12	
Tragic	8		1		9		2				11	
Mixed	1		6		7		1				8	

Card 3.

B. Elements of Story Content

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
a) Setting						
Stairs					3	3
Others	2	1	3	3	1	7
Further desc. & obj.						
chair	7	6	13	9	1	23
pipe	8	7	15	7	3	25
cane or stick	4	5	9	3	1	13
candy cane	1	2	3	2	1	6
b) Situation						
Sitting	12	8	20	11	3	34
Sitting in combination another action(eg. [illegible]-sitting-smoking)	1	2	3	1	1	5
Others	5	2	7	3	1	11
c) Main Hero						
Lion	16	11	27	15	5	47
Mouse	1	1	2			
Fig. Introd.	1					
d) Others						
Mouse	10	9	19	7	3	29
Lion	2	1	3			
Fig. Introduced	14	8	22	10	1	33
e) Desc. of character						
Lion: lion	12	7	19	5		24
dog		1	1	1	1	
man				3		
Mouse: mouse	8	9	17	5		22
little or baby	3	4	7	1	1	9
f) Fig. or obj. Introd.						
Figures: animals	12	5	13	6	1	20
humans	3	3	6	4		10
Objects	3	4	7	3	2	12
g) Figures or obj. omit.						
Mouse	7	2	9	8	2	19
h) Past						
Omitted	6	4	10	7	3	20
Mouse came along	3	1	4	2		6
Others	9	7	16	6	2	24
i) Future						
Omitted	1	1	2	1	1	4
Lion tries to catch mouse	2	4	6		1	7
Lion catches mouse	4		4	1		5
Mouse aggressive to lion	1	1	2	2	1	5
Fig. introd. aggresskve to lion	2	3	5			5
Others	8	3	11	11	2	24

Lion mother	2	2	4	3		7

C. Common Story

Approach on this card is predominantly accepts. Flow of Expression for the main story is constricted or natural with the inquiry free, constricted or natural. Type is predominantly simple explanation. Organization in the main story is loose, and in the story plus inquiry is somewhat organized or organized. Realism is predominantly on the human level but a significant number are mixed. Mood is neutral, unhappy or tragic.

Setting is rarely given, but the children usually point out 'chair', 'pipe' and 'the cane or stick' held by the lion. The situation is generally 'sitting'. The Main Hero is the Lion seen as a lion or dog. Others include the mouse seen as a mouse, and characterized as being 'little or baby'. Figures introduced include both 'animals' and 'humans' and there are a number of 'objects' introduced. The mouse is omitted 44% of the time.

Past is omitted 40% of the time and no other category is significant. No category reaches significance in the future, however, but a significant category of 'the Lion showing aggression to the Mouse' could be obtained by combining the data for 'Lion tries to catch mouse' and 'lion catches mouse'.

Card 4. Description: A kangaroo with a bonnet on its head, carrying a basket with a milk bottle, in her pouch is a baby kangaroo with a baloon, on a bicycle, a larger kangaroo child.

A. Elements of Story Structure

	Group 1						Group 2		Group 3		Total Group	
	Boys		Girls		Total							
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects	0		0		0				0			
Hesitant	1		2		3		3		0		6	
Accepts	17		10		27		12		5		44	
b) Flow of expression												
Very constricted	0	1	0	0		1	3	0	0	1	3	2
Constricted	9	0	5	1	14	1	7	3	5	3	26	7
Natural	6	7	5	3	11	10	4	5		0	15	15
Free	1	7		5	1	12	0	6		1	1	19
Very free	2	3	2	3	4	6	1	1			5	7
c) Type												
Narrative	2		2		4		1		0		5	
Explanation: simple	12		8		20		7		5		32	
complex	3		2		5		3				8	
Description: character	1		0		1		1				2	
objects	0		0									
mixed							3				3	
d) Organization												
Confused	1	2	0	1	1	3	2	4	0	1	3	8
Loose	10	1	8	0	18	1	12	1	5	3	35	5
Somewhat organized	6	8	3	5	9	13	1	10		1	10	24
Organized	1	7	1	6	2	13	0				2	13
e) Spontaneous Elab.												
Old: Repeated	1	0	1		2		0		2		4	
Extended			1		1		3		2		6	
New: Lengthy			1		1						1	
Brief	2				2						2	
Mixed							1		1		2	
f) Realism												
Human	13		12		25		11		5		41	
Animal												
Mixed	5				5		4				9	
g) Mood												
Happy	3		6		9		2				11	
Neutral	4		2		6		3		5		14	
Unhappy	3		3		6		6				12	
Tragic	4				4		2				6	
Mixed	4		1		5		2				7	

Card 4.

B. Elements of Story Content

	Group 1 Boys	Group 1 Girls	Group 1 Total	Group 2	Group 3	Total Group
a) Setting						
Outside (going to the store or home)	9	7	16	3		13
Country, etc.	6	2	8		1	9
Weather conditions	1	2	3	2		5
Further desc., Trees at right as Christmas trees	3	4	7	5		12
b) Situation						
Going (from home)	9	6	15	3	1	19
Coming (home)	3	3	6	1	1	8
*Further desc. of sit.						
(B) riding (bike)	14	11	25	7	2	34
(M) carrying (basket)	7	7	14	6	2	22
(M) carrying (baby)	7	7	14	4		18
(Baby) " (balloon)	4	9	13	2	1	16
(M) jumping etc.	1	5	6	2		8
Others	2		2	4		6
c) Main Hero						
Larger kangaroo child	11	3	14	5	2	21
Kangaroo (large)	2	6	8	5	2	15
Three (kangaroos	3	1	4	3		7
Two kangaroos	2		2	1	1	4
Baby kangaroo		2	2			2
Fig. introduced				1		1
d) Others						
Kangaroo (large)	12	6	18	10	3	31
Baby kangaroo	11	9	20	2	4	31
Kangaroo child	5	7	12	8	3	23
Figures introduced	12	5	17	3	1	20
e) Desc. of Characters						
Kangaroo: kangaroo	5	4	9	1		10
dog		1	1	4		5
mother	1	6	7	4	1	12
Child: kangaroo	4	3	7	1		8
little or baby	4	4	8	2	1	11
little boy	5		5	3		8
boy child etc.	3	2	5		1	6
Baby: kangaroo	2	3	5	1		6
little or baby	7	6	13	6	2	21
f) Fig. or Obj. Introd.						
Animal	9	3	12	2		14
Human	3	2	5	1		6
Objects	5	2	7	1		8
g) Fig. or Obj. Omitted						
Baby kangaroo	5	1	6	8	1	15
h) Past						
Omitted	6	8	14	8	2	24
Getting ready to go out	3	2	5		1	6
Going to the store	2	2	4		1	5
Others	7		7	7	1	15

* Further description of the situation includes activities that are found in combination with each other or with the activities listed under Situation.

	Group 1			Group	Group	Total
	Boys	Girls	Total	2	3	Group
i) Future						
Omitted	1	1	2	1	2	5
Going home	5	1	6	2	1	9
Eating	1	2	3	4	1	8
One or all killed	4		4	3		7
Others	7	8	15	5	1	21

C. Common Story

The Approach on this card is accepts or hesitant. Flow of Expression for the main story is constricted or natural with the inquiry either free or natural. The Type is predominantly simple explanation. Organization for the main story is predominantly loose but a significant number are SOMEwhat organized, and for the story and inquiry somewhat organized or organized. Realism is on a human level. The mood is neutral, unhappy or happy.

The Setting is "outside" with the trees at the right seen as Christmas trees. The Situation is concerned with "going" somewhere with a further description of "the child riding a bike", "the kangaroo carrying a basket and a baby", and "the baby carrying a balloon". The Main Hero is the Kangaroo Child or the Large Kangaroo. Others include the Large Kangaroo the Baby Kangaroo, the Kangaroo Child, and Figures Introduced. The Kangaroo Child is seen as a 'kangaroo' and further described as 'little or baby'. The Large Kangaroo is seen as a 'kangaroo' and as a 'mother'. The Baby Kangaroo is characterized as 'little or baby'. Figures Introduced are predominantly 'animals'. The Baby Kangaroo is omitted 30% of the time.

Past is omitted 48% of the time and nothing else reaches the level of significance. Nothing reaches the level of significance in the future.

It is to be noted that 'going' (to the store or somewhere) appears in both the past and situation (present) and 'coming' (home) appears in both the situation (present) and future. The main theme thus centres around the 'kangaroos going somewhere' (to the store, picnic etc.) and then 'coming home' with actions centering around the 'child riding his bike', 'the mother carrying the basket and the baby', and 'the baby carrying a balloon'.

Card 5. Description: A darkened room with a large bed in the background, a crib in the foreground in which are two baby bears.

A. Elements of Story Structure

	Group 1						Group 2		Group 3		Total Group	
	Boys		Girls		Total							
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects												
Hesitant	2		1		3		1				4	
Accepts	16		11		27		14		5		46	
b) Flow of expression												
Very constricted	4				4		3		1		8	
Constricted	9	3	7	1	16	4	7	2	3	2	26	8
Natural	2	8	3	6	5	14	3	4	1	1	9	19
Free		3		3		6	2	6		1	2	13
Very free	3	4	2	2	5	6		1			5	7
Inquiry rejected								2		1		3
c) Type												
Narrative	3		2		5		2				7	
Explanation: simple	9		8		17		3		1		21	
complex			1		1		3		2		6	
Description: character	2		1		3		4				7	
objects	2				2				2		4	
M mixed	2				2		3				5	
d) Organization												
Confused		6	1	1	1	7	2	4			3	11
Loose	13	1	8	5	21	6	10	3	4	1	35	10
Somewhat organized	3	5	2	6	5	11	2	6	1	3	8	20
Organized	2	6	1		3	6	1				4	6
Inquiry rejected								2		1		3
e) Spontaneous Elab.												
Old: repeated			1		1				1		2	
extended							1				1	
New: lengthy												
brief							3				3	
Mixed												
f) Realism												
Human	14		10		24		13		4		41	
Animal												
Mixed	4		2		6		1				7	
Rejected							1		1		2	
g) Mood												
Happy	2		4		6						6	
Neutral	5		6		11		5		2		18	
Unhappy	9		1		10		6		2		18	
Tragic	2				2						2	
Rejected							1		1		2	
Mixed			1		1		3				4	

Card 5.

B. Elements of Story Content

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
a) Setting						
House	4	1	5	5		10
Dark or night, etc.		3	3	7		10
Others	1		1	3	1	5
Further Desc.						
Bed	9	2	11	5		16
Crib	3	4	7	2	1	10
b) Situation						
Sleeping	7	10	17	9	1	27
Going to bed or to sleep	3		3	2	1	6
In bed, or lying down	4	1	5	1		6
Omitted				1	1	2
Others	4	1	5	2	2	9
Further Desc.						
Baby Bears and Mother and Father in bed	5	6	11	3		14
Baby Bears in bed and Mother and Father coming to bed	2	4	6		1	7
c) Main Hero						
Baby Bears	13	11	24	9	4	37
Baby Bear	4	1	5	4		9
Three Baby bears	1		1	1		2
Omitted				1	1	2
d) Others						
Figures introduced	32	23	55	10	3	68
e) Desc. of Characters						
Baby bears: Bears	10	10	20	10	1	31
Baby or little	9	4	13	5	1	19
Figures introduced:						
Mother	10	12	22	3	1	26
Father	10	9	19	2		21
f) Fig. or Obj. Introduced						
Figures: Animals	28	22	50	9	3	62
Humans	4	1	5	1		6
Objects	3		3	2		5
g) Figures or objects Omitted						
One baby bear	2	1	3	3		6
Two baby bears				1	1	
h) Past						
Omitted	6	6	12	8	4	24
Get ready and/or go to bed	3	5	8	1		9
Others	9	1	10	6	1	17
i) Future						
Omitted	1	1	2	3	1	6
Wake up and/or get up	5	4	9	4	3	16
Get up and get breakfast	3	3	6	2		8
Aggression to bears	5		5	2		7
Others	4	4	8	4	1	13

C. Common Story

Approach to the story is predominantly accepts. Flow of Expression for the main story is natural or free and for the inquiry is natural or free. Type is simple explanation. Organization for the main story is predominantly loose and for the story plus inquiry is somewhat organized, confused or loose. Realism is predominantly on a human level. The mood is neutral or unhappy.

The setting is in a 'house' and it is 'night' time. A Further Description of the Setting includes the crib seen as a 'bed' or 'crib'. The Situation is 'sleeping' with a Further Description of the Setting including the fact that 'both the baby bears and the parents are seen in bed'. The Main Hero is predominantly the Baby Bears with Others as Figures Introduced'. The Baby Bears are seen as 'bears' and characterized as 'baby or little' and the Figures Introduced are significantly the 'mother' and 'father'.

Past is omitted 48% of the time and nothing else reaches the level of significance for the total group. The Future is concerned with 'waking up and/or getting up'.

It is to be noted that 'going to bed' appears in both past and situation (present), adding further emphasis to this theme.

Card 6. Description: A darkened cave with two dimly outlined bear figures in the background; a baby bear lying in the foreground

A. Elements of Story Structure

	Group 1 Boys M	Boys A	Girls M	Girls A	Total M	Total A	Group 2 M	Group 2 A	Group 3 M	Group 3 A	Group Total M	Group Total A
a) Approach												
Rejects												
Hesitant							4		1		5	
Accepts	18		12		30		11		4		45	
b) Flow of Expression												
Very constrictive	1	1			1	1	7				8	1
Constrictive	11	2	7		18	2	3	2	4	1	25	5
Natural	3	6	3	7	6	13	2	8	1	4	9	25
Free	1	4		3	1	7	2	3			3	10
Very free	2	5	2	2	4	7	1				5	7
Inquiry rejected								2				2
c) Type												
Narrative	3		2		5		3				8	
Explanation: simple	9		8		17		3		3		23	
complex			2		2		1				3	
Description: character	3				3		5		2		10	
objects	1				1		1				2	
Mixed	2				2		2				4	
d) Organization												
Confused	1	4	2	1	3	5	3	6			6	11
Loose	13	2	7		20	2	11		5	1	36	3
Somewhat organized	3	7	3	7	6	14	1	4		4	7	22
Organized	1	5		4	1	9		3			1	12
Inquiry rejected								2				2
e) Spontaneous Elab.												
Old: repeated												
extended							1				1	
New: lengthy			1		1		1				2	
brief	2		2		4						4	
mixed												
f) Realism												
Human	5		3		8		6		2		16	
Animal	8		1		9		4		2		15	
Mixed	5		8		13		3		1		17	
Rejected							2				2	
g) Mood												
Happy			3		3						3	
Neutral	5		3		8		3		3		14	
Unhappy	5		4		9		4		2		15	
Tragic	4				4		4				8	
Mixed	4		2		6		2				8	
Rejected							2				2	

Card 6.

B. Elements of Story Content

	Group 1			Group	Group	Total
	Boys	Girls	Total	2	3	Group
a) Setting						
Cave, hole, etc.	5	3	8			8
Country (woods, forest, etc.)	3		3	3		6
Ground or dirt	3	1	4	2		6
Cond. of ground (snow or water)	1	3	3	2		5
House	2	1	3	2		5
Others	1	3	4	1	1	6
b) Situation						
Sleeping	9	3	12	5		17
Lying down, resting, going to sleep	5	4	9	3	1	13
One sleeping, one awake	3	5	8	1		9
Omitted				2		2
Others	1		1	4	4	9
c) Main Hero						
Baby Bear	13	8	21	7		28
Two bears (they)	2	2	4	3	3	10
Three bears (they)	2	2	4	2	2	8
Big Bear					1	1
Fig. Introd.	1					1
Omitted				2		2
d) Others						
Mother	5	8	13	4		17
Father	7	5	12	3		15
Baby	3	3	6	1	2	9
One big animal	6		6	2	1	9
Figs. Introd.	8	5	13	7	2	22
e) Desc. of figures						
Baby bears: Bears	8	5	13	3	1	17
Baby or little	14	6	20	8	1	29
Background figures: bears	4	4	8	6		14
Mother bear	3	3	6	3		9
Father bear	5	2	7	2		9
Big bears	4		4	1		5
f) Figs. or Obj. Introdc.						
Figs.: Animals	6	1	7	3	2	12
Humans	2	4	6	4		10
Objects				2		
g) Fig. or Obj. Omitted						
One background figure	10	4	14	9	3	26
Two " "	3					
Card rejection				1		
h) Past						
Omitted	7	3	10	9	3	22
Went to or found place to sleep	6	4	10	2	1	13
Went walking and have a rest	3	2	5		1	6
Others	2	3	5	4		9

	Group 1			Group	Group	Total
	Boys	Girls	Total	2	3	Group
i) Future						
Omitted	1	2	3	2	2	7
Wake up and eat	5	3	8	2	1	11
Aggression to bears hurt or killed	5	2	7	4		11
Wake up and/or get up	2	3	5	1		6
Go home	2	1	3	2	1	6
Others	3	1	4	4	1	9

C. Common Story

The Approach to this story is predominantly accepts. Flow of Expression for the main story is constricted and for the inquiry natural or free. The Type of story is a simple explanation or description of characters. Organization for the main story is predominantly loose and for the story plus inquiry somewhat organized, organized or confused. Realism occurs on all three levels: mixed, human and animal. Mood is unhappy or neutral.

Setting is usually given as a description of where the bears are sleeping but this description varies. The Situation is 'sleeping' or 'not sleeping' (i.e., lying down, resting, going to sleep).

The Main Hero is the Baby Bear or two bears (they). Others include Background Figures and figures introduced. The Baby Bear is seen as a 'bear' and described as 'little or baby'. Background Figures are seen as 'bears' or 'mother' and 'father' of various types. Figures Introduced include both 'animals' and 'humans'. 'One background figure' is omitted a significant number of times.

The Past is omitted 44% of the time and another significant element is the "bears going to/or finding a place to sleep". Future is concerned with 'waking up and eating' or'aggression to the bears with one or all being killed'.

Card 7. Description: A tiger with bared fangs and claws, leaping at a monkey which is also leaping through the air.

A. Elements of Story Structure

	Group 1 Boys		Group 1 Girls		Group 1 Total		Group 2		Group 3		Total Group	
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects												
Hesitant	3		2		5		4				9	
Accepts	15		10		25		11		5		41	
b) Flow of Expression												
Very constrictive	2		1		3		4		1	3	8	3
Constrictive	8	2	8		16	2	7	3	4	1	27	6
Natural	4	9		7	4	16	3	7		1	7	24
Free	2	4	2	4	4	8		4			4	12
Very free	2	3	1	1	3	4	1				4	4
Inquiry rejected								1				1
c) Type												
Narrative	2		2		4		1				5	
Explanation: simple	8		7		15		8		4		27	
complex	5		2		7		1				8	
Description: character	1		1		2		3		1		6	
objects												
mixed	2				2		2				4	
d) Organization												
Confused		2		1		3	1	4		3	1	10
Loose	10	1	9	1	19	2	13	2	5	1	37	5
Somewhat organized	5	9	2	4	7	13	1	5		1	8	19
Organized	3	6	1	6	4	12		3			4	15
Inquiry rejected								1				1
e) Spontaneous Elab.												
Old: repeated												
extended							2		1		3	
New: lengthy	3				3		2				5	
brief	5		1		6				1		7	
mixed												
f) Realism												
Human	1				1		1		1		3	
Animal	10		9		19		11		3		33	
Mixed	7		3		10		3		1		14	
g) Mood												
Happy			1		1						1	
Neutral	2				2		1				3	
Unhappy	8		3		11		6		4		21	
Tragic	6		7		13		7		1		21	
Mixed	2		1		3		1				4	

Card 7.

B. Elements of Story Content

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
a) Setting						
Woods, forest etc.	5	1	6	1		7
Jungle	3	2	5			5
Others	3	2	5	2		7
b) Situation						
Lion trying to catch monkey	7	3	10	2	1	13
Lion going to eat monkey	3	3	6	5	1	12
Lion chasing monkey	4	4	8	2	1	11
Lion biting or eat monkey		1	1	3	1	5
Monkey climbing	3	1	4	1	1	6
Others	1		1	2		3
Further Desc.						
Monkey Climbing in combination chasing etc.	4	6	10	4		14
c) Main Hero						
Monkey	12	5	17	7		24
Tiger	6	7	13	7	4	24
Both animals				1	1	2
d) Others						
Tiger	12	5	17	7		25
Monkey	6	7	13	7	4	24
Figures introduced	2	3	5	5		10
e) Desc. of characters						
Monkey: monkey	16	10	26	7	1	34
Tiger: lion	12	5	17	5		22
tiger	3	6	9	3	1	13
cat	2		2	3	1	6
f) Figures or Obj. Introd.						
Fig: Animals	1	2	3	5		8
Humans	1	1				
Obj:	4			2		6
g) Past						
Omitted	8	3	11	11	4	26
Lion comes along or sees monkey	5	2	7	1		8
Lion chases monkey	2	3	5			5
Others	3	4	7	3	1	11
h) Future						
Omitted	1		1	1	1	3
Tiger catches and/or eats monkey	4	5	9	5	2	16
Monkey escapes	3	3	6	2		8
Very passive climax	3	3	6	2	1	9
Monkey aggressive to Lion	4	1	5	2		7
Others	3		3	3	1	7

4. Summary of Field Work

C. Common Story

Approach to the story is predominantly accepts. Flow of Expression for the main story is constricted and for the inquiry natural or free. Type is simple explanation. Organization for the main story is predominantly loose and for the story plus inquiry somewhat organized, organized or confused. Realism is on an animal level or mixed. Mood is unhappy or tragic.

The Setting is 'outside' (jungle, woods, forest etc.). The The Situation is concerned with the 'Lion trying to catch the Monkey', the 'lion going to eat the monkey' and the 'Lion chasing the monkey'. The Main Hero is the Monkey or the Tiger (equal significance) and Others include the Tiger, Monkey and figures introduced. The Monkey is seen as a 'monkey' and the Tiger as a 'lion' or 'tiger'. A significant number of figures is introduced.

The Past is omitted 52% of the time and nothing else reaches the level of significance. The Future is concerned with the 'Tiger catching and/or eating the Monkey'.

It is to be noted that the 'Lion chasing the Monkey' appears in both the past and situation (present) and the 'lion eating or going to eat the monkey' appears in both the situation (present) and future adding added significance to both these themes.

Card 8. Description: Two adult monkeys sitting on a sofa drinking from tea cups. One adult monkey in foreground sitting on a hassock talking to a baby monkey.

A. Elements of Story Structure

	Group 1 Boys		Group 1 Girls		Group 1 Total		Group 2		Group 3		Total Group	
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects												
Hesitant	1		1		2		4		1		7	
Accepts	17		11		28		11		4		43	
b) Flow of Expression												
Very constricted	2				2		4		1	1	7	1
Constricted	9	2	9		18	2	9	3	4	2	31	7
Natural	4	10	1	8	5	18		10		2	5	30
Free	2	6	1	3	3	9	2	1			5	10
Very free	1		1	1	2	1					2	1
Inquiry rejected								1				1
c) Type												
Narrative	3		2		5		1				6	
Explanation: simple	10		10		20		6		3		29	
complex	2				2		2				4	
Description: character	1				1		6		2		9	
objects												
Mixed	2				2						2	
d) Organization												
Confused	2	7		2	2	9		9		3	2	21
Loose	13	1	6	1	19	2	13	3	5	2	37	7
Somewhat organized	2	9	5	5	7	14	2	1			9	15
Organized	1	1	1	4	2	5		1			2	6
Inquiry rejected								1				1
e) Spontaneous Elab.												
Old: repeated			1								1	
extended							2				2	
New: lengthy	1				1						1	
brief	2				2				2		4	
Mixed												
f) Realism												
Human	17		12		29		15		5		49	
Animal	1				1						1	
Mixed												
g) Mood												
Happy	1		4		5						5	
Neutral	6		4		10		8		5		23	
Unhappy	9		3		12		5				17	
Tragic	2				2		2				4	
Mixed			1		1						1	

Card 8.

B. Elements of Story Content

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
a) Setting						
Home or house	1	3	4	1		5
Others	3	2	5			5
Further Description						
Hassock: chair, stool etc.	3	5	8	3	3	14
Sofa, chesterfield, couch etc.	4	4	8	4	1	13
Picture	7	6	13	7	2	22
* b) Situation and Desc.						
Drinking	3	2	5	2	1	8
Drinking in combination other action	2	1	3			
Sitting - drinking	2	2	4	4		8
Talking	3	2	5	1		6
Talking in combination with other actions	5	4	9	1		10
Sitting		1	1	2	3	6
Sitting in combination with other actions	2	2	4	1	1	6
Others	4	1	5	7		12
c) Main Hero						
Baby monkey	12	8	20	4	2	26
** Monkeys	6	4	10	11	3	24
d) Others						
Adult monkeys						
Mother	9	11	20	5	1	26
Father	9	9	18	4	1	23
Man	4	1	5	2	1	8
Sister or girl	1	3	4	2		6
Grandparent	3	1	4	1		5
Boy monkey	4	3	7	6	2	15
Figures introduced	3	4	7	2		9
e) Description of Characters						
Baby monkey: Monkey	15	6	21	4	2	27
Baby or little	9	3	12	4	2	18
Boy	6	2	8	1	1	10
Little boy	3	3	6	1		7
Adult monkeys						
Mother monkey	9	8	17	2		19
Father monkey	9	7	16	1		17

* Situation and Description of the Situation have been included together because they are so closely related on this card.

** Description of "monkeys" seen as the main hero

Monkeys	5	1	6	7	2	15
They	1	3	4		1	5
Others				4		

Card 6.

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
f) Figures or Objects						
Animals	3	3	6	1		7
Humans		1	1	1		
g) Past						
Omitted	4	5	9	12	5	26
Monkeys planning a party or "someone" comes over	3	5	8	1		9
Monkeys made or ate supper	6	1	7			7
Others	5	1	6	2		8
h) Future						
Omitted	3	1	4	4	3	11
Baby monkey bad spanked or sent to bed	5	2	7	5		12
Someone" goes home		4	4	2		6
Monkeys go to bed	4		4	1		5
Others	6	5	11	4	1	16

C. Common Story

Approach on this card is predominantly accepts. Flow of Expression for the main story is constricted and for the inquiry is natural or free. The Type is significantly simple explanation. Organization for the main story is predominantly loose and for the story plus inquiry confused or somewhat organized. Realism is almost exclusively human. The Mood is neutral or unhappy.

The Setting is seldom given but a description of the card includes the Hassock seen as a 'chair' or 'stool', the Sofa as a 'chesterfield, couch, etc.' and mention is usually made of the 'picture' on the wall. The Situation and Description of the Situation if taken together give the main actions as 'drinking','sitting', and 'talking'. It is to be noted that these actions usually appear in combination. The Main Hero is the Baby Monkeys or Monkeys (usually seen as monkeys). Others include the Adult Monkeys and the Boy Monkey. The Baby Monkey is usually seen as a 'monkey' and described as 'baby or little', or 'boy'. The Adult

Monkeys are predominantly seen as 'mother' or 'father' and usually the description is extended to 'mother and father monkey'.

The Past is omitted 52% of the time and no other elements reach the level of significance. The Future is omitted 22% of the time and the other predominant idea is concerned with 'the Baby Monkey is bad and is spanked and/or sent to bed'.

Card 9. Description: A darkened room seen through an open door from a lighted room. In the darkened one, there is a child's bed in which a rabbit sits up looking through the door.

A. Elements of Story Structure

	Group 1 Boys		Group 1 Girls		Group 1 Total		Group 2		Group 3		Total Group	
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects												
Hesitant	2		1		3		5				8	
Accepts	16		11		27		10		4		41	
b) Flow of expression												
Very constricted	2		1		3		4	1	2		9	1
Constricted	11		6		17		6	4	3	2	26	6
Natural	2	6	2	6	4	12	4	5		1	8	18
Free	3	11	1	5	4	16		4		1	4	21
Very free		1	2	1	2	2	1				3	2
Inquiry rejected								1		1		2
c) Type												
Narrative	2		2		4		1				5	
Explanation: simple	7		5		12		5		2		19	
complex	4		3		7		3		1		11	
Description: character	2		1		3		2				5	
objects												
mixed	3		1		4		4		1		9	
Rejected									1		1	
d) Organization												
Confused		1		1		2		4		1		7
Loose	12	1	6		18	1	11	4	3	2	32	7
Somewhat organized	4	8	4	6	8	14	4	1	1		13	15
Organized	2	8	2	5	4	13		5		1	4	19
Rejected (card)									1		1	
Inquiry rejected								1		1		2
e) Spontaneous Elab.												
Old: repeated							1				1	
extended	1				1						1	
New: lengthy												
brief	1		1		2						2	
Mixed												
f) Realism												
Human	17		11		28		14		4		46	
Animal												
Mixed	1		1		2		1				3	
Rejected									1		1	
g) Mood												
Happy												
Neutral	3		5		8		7		4		19	
Unhappy	11		6		17		8				25	
Tragic	3		1		4						4	
Mixed	1				1						1	
Rejected									1		1	

Card 9.

B. Elements of Story Content

	Group 1			Group	Group	Total
	Boys	Girls	Total	2	3	Group
a) Setting						
House or home	5		5	3	1	9
Dark or night	2	2	4	2		6
Others	1	3	4	2	1	7
Further Desc.						
Door: mentioned only		1	1	4	2	7
open	6	5	11	3	2	16
shut	2	1	3	2		5
Child's bed: bed	6	7	13	8	1	22
crib	4	4	8	3	1	12
broken bed	4		4	1		5
b) Situation						
Sleeping	5	2	7	6	1	14
Sitting up	3	7	10	1	1	12
In bed, lying, resting	2		2	2	1	5
Going to sleep	3	1	4	1		5
Wake up and/or get up	1	1	2	3		5
Others	4	1	5	2	1	8
Rejection					1	1
c) Main Hero						
Rabbit	18	12	30	15	4	49
Rejection					1	1
d) Others						
Figures introduced	21	18	39	10	1	50
e) Desc. of Characters						
Rabbit: rabbit	6	7	13	4		17
bunny	6	3	9		1	10
bunny rabbit	4	1	5	5		10
little or baby	8	11	19	5	1	25
Figures introduced						
Mother	6	6	12	4	1	17
Father	4	2	6	3		9
Other Animals	6	5	11	2		13
Humans	5	5	10	1		11
f) Fig. or Obj. Introd.						
Figures (see desc. char.,	21	18	39	10	1	50
Objects					1	
g) Fig. or Obj. Omitted						
Rabbit					1	1
h) Past						
Omitted	4	2	6	6	3	15
Obj. or char. disturbs rabbit	5	4	9	1		10
Rabbit getting ready for and/or going to bed	3	2	5			5
Rabbit in bed	2	1	3	4		7
Put rabbit to bed	3	1	4		2	6
Others	1	2	3	4		7

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
i) Future						
Omitted	1		1	4	3	8
Wake up and/or get up	4	4	8	2	1	11
Someone aggressive to Rabbit (kills, hurts, scares)	6	3	9	2		11
Something frightens rabbit	3	1	4	1		5
Others	4	4	8	6	1	15

C. Common Story

Approach on this card is predominantly accepts. Flow of Expression for the main story is constricted and for the inquiry free or natural. The Type is simple or complex explanation. Organization for the main story is loose or somewhat organized and for the story plus inquiry is organized or somewhat organized. Realism is predominantly human action. Mood is unhappy or neutral.

The Setting is given a significant number of times but no one element is significant. Further Description of the Setting includes the Door as 'open' and the Child's Bed seen as a 'bed' or 'crib'. The Situation is concerned with 'sleeping' or 'sitting up'. The Main Hero is almost exclusively the Rabbit and others are figures introduced. The Rabbit is seen as a 'rabbit', 'bunny' or 'bunny rabbit' and is characterized as 'little or baby'. Figures Introduced include the 'mother', other 'animals' and 'humans'.

The past is omitted 30% of the time and the other significant elements is concerned with an 'object or character disturbing the rabbit'. Another significant element of 'going to bed' could be obtained

by combining 'getting ready for and/or going to bed' and 'putting rabbit to bed'. The Future is concerned with the 'Rabbit waking up and / or getting up' and 'someone being aggressive to the Rabbit'.

It is to be noted that 'waking up and/or getting up' appears in both the situation (present) and the future, adding significance to this element.

Card 10. Description: A baby dog lying across the knees of an adit dog; both figures with a minimum of expressive features. The figures are set in the foreground of a bathroom.

A. Elements of Story Structure

	Group 1 Boys		Group 1 Girls		Group 1 Total		Group 2		Group 3		Group Total	
	M	A	M	A	M	A	M	A	M	A	M	A
a) Approach												
Rejects												
Hesitant	2				2		10		1		13	
Accepts	16		12		28		5		4		27	
b) Flow of Expression												
Very Constricted	4		1		5		10		1	1	16	1
Constricted	9	1	7	1	16	2	5	5	2	1	23	8
Natural	1	10	2	6	3	16		6	1	3	4	25
Free	1	6		5	1	11		3	1		2	14
Very free	3	1	2		5	1					5	1
Inquiry rejected								1				1
c) Type												
Narrative	3		2		5				1		6	
Explanation: simple	8		6		14		4		3		21	
complex	1		2		3						3	
Description: character			1		1		4				5	
objects												
mixed	6		1		7		7		1		15	
d) Organization												
Confused		2	1	1	1	3					1	3
Loose	12	2	7		19	2	12	5	3	2	34	9
Somewhat organized	3	7	4	3	7	10	2	5	1	1	10	16
Organized	3	7		8	3	15		4	1	2	4	21
Inquiry rejected							1	1			1	1
e) Spontaneous Elab.												
Old: repeated									1		1	
extended									1		1	
New: lengthy			1		1		1				2	
brief												
Mixed			1		1						1	
f) Realism												
Human	15		10		25		12		5		42	
Animal												
Mixed	3		2		5		2				7	
Rejected							1				1	
g) Mood												
Happy							1				1	
Neutral	3		2		5		6		4		15	
Unhappy	13		9		22		6		1		29	
Tragic							1				1	
Mixed	2		1		3						3	
Rejected							1				1	

Card 10.

B. Elements of Story Content

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
a) Setting						
Bathroom	3	5	8	4	5	17
Others	1			1		
Further Desc.						
Toilet: described	4	2	8	4	1	12
included in story	7	5	12	7	4	23
b) Situation						
* Spanking	10	9	19	2		21
* Wants to/or going to the bathroom	2	1	3	4	3	10
* Washing or drying	4	1	5	2		7
Others	2	1	3	6	2	11
Rejection				1		1
c) Main Hero						
Baby dog	16	12	28	9	3	40
Bath dogs	2		2	6	2	10
d) Others						
Adult dog	15	12	27	9	3	39
Baby dog	1				1	
Figures introduced	9	5	14	3		17
e) Desc. of Characters						
Baby Dog: Dog	9	8	17	3	3	23
Puppy	8	2	10	3	1	14
little or baby	13	9	22	7	3	32
Adult dog: Mother dog	4	8	12	6		18
Father dog	8	1	9	1		10
Figures introduced: mother or father	4	2	6	2		8
f) Figures or Obj. Introd.						
Animals	6	4	10	2		12
Humans	3	1	4	1		5
g) Figures or Obj. Omitted						
Fig.: Adult Dog	1		1	1		
h) Past						
Omitted	2		2	8	4	14
* Baby dog wants to go/or has gone to the toilet	6	1	7	1		8
Baby dog was bad	2	4	6			6
Baby dog wet his pants	1	2	3	1	1	5
Others	7	5	12	5		17

	Group 1 Boys	Girls	Total	Group 2	Group 3	Total Group
i) Future						
Omitted	2	1	3	5	2	10
Adult dog will punish baby dog	5		5	2		7
Baby dog will flush toilet and/or put the lid down and/orwash hands	2		2	2	3	7
Go to bed and/or to sleep	1	4	5	1		6
Others	8	7	15	5		20

---

* The three primary ideas expressed in this story are'the adult Dog spanking the Baby Dog','the Baby Dog wanting to go and/or going to the toilet', and 'the Adult Dog washing the Baby Dog'. These elements take place in the past, present, and future and the following table gives a better idea of the prominance of these various themes by charting them for the three elements of the story. It is to be noted that some elements have appeared in more than one element of the story on previous cards but these instances have not affected the statistics to the extent they do on this card.

Spanking:	Past	10	9			21
	Present	10	9	19	2	21
	Future	3				3
	Total	13	9	22	2	24
Baby dog wants to go/or going to the Bathroom						
	Past	6	1	7	1	8
	Present	2	1	3	4	3 10
	Future		2	2		2
	Total	8	4	12	5	20
Adult dog washing or drying baby dog						
	Past	2	2	4		4
	Present	4	1	5	2	7
	Future	1	1	2	1	3
	Total	7	4	11	3	14

C. Common Story

Approach to this card is accepts or hesitant. Flow of Expression for the main story is constricted or very constricted, and for the inquiry is natural or free. Type is simple explanation or mixed description of characters and objects. Organization for the main story is predominantly loose, but somewhat organized is also significant. For the main story plus the inquiry, organized or somewhat organized are significant. Realism is predominantly on a human level. Mood is unhappy or neutral.

Setting is the 'bathroom' with description including the 'toilet' (either described or used in the story). Situation includes 'spanking' and the 'Baby Dog wanting to go and/or going to the bathroom'. The Main Hero is the Baby Dog but both dogs (they) occur a significant number of times. Others includes the Adult Dog and figures introduced. The Baby Dog is seen as a 'dog' or 'puppy' and described as 'little or baby'. The Adult Dog is seen as the 'mother' or 'father'. Figures Introduced are predominantly animals.

The past is omitted 28% of the time and the future 20% and none of the other elements are significant. However, as has been noted, 'spanking', 'Baby Dog wants to go/or is going to the toilet' and the 'Adlt Dog washing or drying the Baby Dog' appears in the past, present, and future and add significance to these themes.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The main purpose of this thesis has been the production of common stories as told on the CAT by nursery school children. The normative data obtained have been presented in the following forms: (i) statistical tables of reaction time, total time, story time, total administration time and story length; (ii) frequency tables of story structure; (iii) frequency tables of story content; (iv) prose statements of common stories.

A. Discussion of the Validity of the Approach Used in this Thesis

The following discussion will attempt to evaluate the validity of this project by relating the normative data to the experimental group of nursery school children, the method of administration and the method of analysis.

1. Subject Information All the subjects used in the nursery school group were, at the time of testing, students at the Edmonton College Kindergarten. All the children who could be worked into the testing schedule were administered the CAT. On the basis of age, the children were divided into three groups: Group 1, five year olds, Group 2, four year olds and Group 3, three year olds.

Unfortunately there were several factors which prevented calling the group a "normal, preschool group". The first concerns the age of the children which averages nearly five years (4 years, 11 months and

14 days). Although the individual groups all average slightly over the 5 months level for their respective ages, the predominance of five year olds in the total group raises the group average. The average age is then higher than the ideal average age of four years for a group composed of these three age levels.

Another difficulty arising from the subject data concerns the three year old group (Group 3) which is too small to warrant the basis of any final conclusions. Moreover, the sex distribution predominantly favors the boys.

Perhaps the main problem in this area concerns the paucity of information regarding the type of group which offered the stories. It would have been ideal to present such items as the marital status of the parents, the number of siblings and place of the child in the family constellation, the economic conditions of the home, the cultural level and background of the family and the religious affiliation. (24) Unfortunately very little of this information became available for the experimental nursery school group. While the information available probably does not represent the group, a significant conclusion points to a very high percentage of working mothers. Other workers report such a background for their subjects. (36)

In using the normative data obtained then, it will be necessary to consider them as temporary criteria and recognize their deficiency as applied to the total group because of age factors, numbers in the groups, the predominance of boys in the group, and the lack of specific subject information. While these are fairly definite indications of a lack of

validity for the common stories, it is possible that the following factors have minimized this conclusion.

2. Method of Administration

The administration was organized while keeping in mind the special difficulties of testing young children.

Preliminary contact was made with the children in their own setting, i.e., the preschool environment. Following this contact was made with the children individually or in pairs (depending on age) in the test room for the administration of a preliminary test. This was done to acquaint the children with the examiner and the testing situation. With this preliminary establishment of rapport, it was then possible to proceed with administration of the CAT under fairly good conditions.

The efficiency of the administration procedure may be judged from the fact that,after the preliminary administration of the Draw-A-Man, all children were eager to return to the testing situation for the administration of the CAT. Only two rejections of the card occurred and these were in the three year old group on the first card. The inquiry on these two rejects was comparable to the child's productions on other cards. The inquiry was rejected eleven times on various cards but these were mostly in Groups 2 and 3. It is considered that the rejections were more a result of age of subjects than the administration procedure.

Having structured the administration to meet the needs of young children and minimized the difficulties of testing this group, the

results obtained appear to indicate that the testing situation was fairly well designed to elicit productions that would be an adequate representation of the child of this period.

3. Method of Analysis

To produce valid normative data the method of analysis itself must be valid and reliable. The method of analysis for Story Structure was necessarily somewhat subjective. However, by careful defining of the elements and a re-reading of the data by cards, a fairly reliable indication of what to expect in the various categories was obtained. Many of the elements appeared consistently and thus gave a very high degree of significance, adding further emphasis to the validity of the approach.

Analysis for story content was on rather more objective level, and the validity was increased by recording the subject's own words on the analysis and tabulation sheets and then abstracting the common elements.

The standard of significance for common elements was set at the 20% level of frequency because of the difficulty in definitely defining the subject information for the experimental group. It is postulated that this level of significance partly compensates for the lack of the necessary subject information in that it is high enough to eliminate ideas which would be presented by 'minority groupings' of children should they appear in the group.

In summary, then, it appears that, while the preschool group used in this study may not fully represent the preschool population

because of unequal distribution of age, background and sex, there is reason to believe that it is a representative nursery school group.

Again, the method of administration and analysis would seem to have at least partly compensated for these otherwise unbalancing features. It would appear that the results for the group tested are valid for that group, and that in applying this information to the preschool population the normative material can be used with some degree of confidence.

B. The Results

Having discussed the validity of the separate factors which interact to produce the validity of the results, it is now possible to summarize the conclusions which may be drawn with respect to the results.

1. Time elements and Story Length: The most significant factor here appears to be an age factor. Group 1 average a shorter reaction time, longer total time, longer story time and greater number of words. It would appear that, with increasing age, even in one year intervals, the subjects become better able to handle new problems with efficiency. Longest reaction times occurred on Card 1 for Group 1, after which the reaction time decreased with some consistency for the remaining pictures. It would appear from this that the initial problem of adjustment was great, but on the basis of experience, the children were able to handle succeeding pictures more adequately. The younger groups, on the other hand, appeared to find the nature of the stimulus-picture somewhat disturbing, with the result that certain pictures had an inhibiting influence on reaction time.

Another important finding was the length of the inquiry which doubled that of the administration of the main cards. It is also possible that the length of time consumed in the inquiry is an indication of its value in turning up response material.

2. Characteristics of Story Structure.

Generally the characteristics of story structure may be summarized as follows: Approach to the problem, after the initial hesitant reactions on Card 1, was fairly consistently accepts; Flow of Expression for the main stories was on the whole constricted; but with the addition of the inquiry became natural or free; Type of story was predominantly simple explanation; Organization for main stories was loose but for the story plus inquiry was somewhat organized or organized; Realism seemed to depend on the nature of the stimulus-picture, but whether human or animal did not lower the significance of the production; Mood was predominantly neutral or unhappy, with a significant number of aggressive themes.

From this summary, it appears that the stories themselves were not 'stories' in the full sense of the word. However, with the addition of the inquiry they came much closer to this criterion. After an initial hesitancy the children were able to adjust to the problem. It appears also that animals are adequate identification figures for children.

3. Characteristics of Story Content. These characteristics may be summarized as follows: the Setting in most cases is not significant; Situation generally depicts what is happening in the card, but these

elements may also be found in past and future; it is difficult to ascertain the main hero but generally these have been found to be the group as a whole or the one most closely resembling the subject in age; Others generally include the mother, father and aggressive figures; there are a great many Figures Introduced and Figures Omitted tend to be those that are not too easily distinguished on the card; Past is omitted a significant number of times by all groups, but particularly by the younger groups; Future is omitted fairly often and themes of aggression appear to run through this element.

It would appear from this summary that elements generally seem to revolve around the family constellation, which, actually, is reasonably the main environment of the child. A great many aggressive figures enter into the stories, some specified and some not, which may indicate the child's uneasiness or fear of the environment. Further the child appears to identify with the character about whom he is talking which would seem to indicate a "self-concept" which has not been fully formulated. It is possible that the child's "time orientation" is not too specifically constructed with the result that the setting appears in both the past and future. Past is significantly omitted while future is often omitted. The child would seem to be trying to cope with reality, yet in his own fashion. If mother and/or father were not depicted in the picture, he usually introduces them.

4. Common Stories. The common stories have been obtained from the frequency tabulations (20% level of significance) of the total nursery school group. The level of significance selected has not

resulted in a great many significant stories, but it is probable that the validity of the story or stories is greatly increased.

From the general conclusions presented above which find fulfillment in the prose accounts of the common stories, it would appear that the CAT presents a fairly good indication of the child's reaction to and handling of its problem of growth. More specifically, the CAT presents indications of the child's attempts and stage in adjustment, specific needs, fears and his reaction to and handling of aggression.

The common stories, then, give the clinician a fairly useful statistical basis for interpretation of CAT protocols. Further, they may serve as a basis for selection of specific areas to be investigated, or omission of cards if time is a factor. They also have an application in research projects where more valid interpretations will lead to more reliable and valid results.

The objective of this thesis has been primarily the construction of a set of common stories for the CAT. With the presentation of normative data and common stories, this thesis project is assumed to be fulfilled. The results obtained may be used as a basis of comparison for nursery school children with a fair degree of validity.

Furthermore, a method of administration has been developed which appears to be valid. Experimentation was done on both the instructions and method of inquiry, and the techniques presented in this thesis seem to produce the best results.

Chapter VII

RECOMMENDATIONS

From the foregoing summary and conclusions certain recommendations can be made regarding normative material for the CAT.

A. Recommendations for the use of CAT normative data with nursery school children.

Results of information obtained in this thesis have been presented in two forms: (i) statistical and frequency tables and (ii) prose accounts of common stories for the total group. Both types of data have application in the interpretation of the CAT. The frequency tables show the degree of significance of each element with particular reference to the age of the subjects and serve almost as a rating scale against which to evaluate the significance of various elements in the productions. The common stories provide a fairly general, though more complete idea of the interaction of the elements to form the story.

The application of the normative data obtained in this study was discussed in the last chapter. It remains to caution against the misuse of such information. Interpretation of a subject's agreements with the norms necessitates a configurational approach both with respect to the various responses of the individual and to the psychodynamic context within which the norms themselves exist.

B. Recommendations for future normative studies.

The main recommendation for future studies of normative material on the CAT is concerned with the type of group used in the study. Such

information as age, sex, marital status of the parents, economic conditions of the family, the number of siblings and the child's place in the family must all be considered.

It is suggested that an adequate nursery school or preschool group might consist of 120 subjects, allowing 40 subjects at each age level, with an equal distribution of sex. The other important background information (e.g. marital status, etc.) would have to be worked out in relation to the group and the importance of the various aspects. Research should also indicate if norms for nursery school children will adequately represent the preschool population.

The instructions for both the story and inquiry used in this study appeared to produce adequate results when the two elements are taken as a unit. It is possible, however, that other instructions might bring forth the same amount of material in the story alone, although the preliminary experimentation with different approaches failed to do so.

The Draw-A-Man test seemed to produce an adequate basis for establishment of rapport in this project. It is suggested that some preliminary test is needed to break down the child's initial resistance and introduce him to the testing situation and the examiner. A test of the Draw-A-Man type is brief and easy to administer, similar to the tasks of the Nursery School Classroom and is enjoyable for the child and hence presents a method of easing the child into the situation.

Furthermore, the results of the Draw-A-Man, or a similar test like the Machover[1] Draw-A-Person, will produce additional interpretative material.

It would also be interesting to interpret the stories within the analysis frame work used in this thesis.

Another recommendation deals with the inquiry, which appears in this study to be a very important element. Adequate technique must be established for evaluating the significance of the story and inquiry.

The importance of Figures or Objects Introduced is also to be determined. Perhaps more important is establishing the significance of various elements (pictures and objects) that are omitted. It remains to be seen if these omissions are merely overlooked because of the vagueness of the card or if they have underlying psychological significance.

The analysis scheme itself may be extended to include other significant elements. Also a more objective manner of analysis for elements of story structure may be developed.

A further analysis must also be done to determine the thematic norms for the groups, since apperceptive and thematic are interrelated to such an extent.

Normative studies on other cultural groups are also desirable. The CAT, because of the animal identification figures, presents an ideal instrument for these studies. From comparison with other cultural groups, the effect of various cultural variables may be ascertained. and the instrument may itself serve as a valuable apperception technique for that culture.

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[1] Machover, K., Personality Projection in the Drawing of the Human Figure, Springfield, C. C. Thomas, 1949

Another important field for investigation will be determining normative data for other normal age groups to which the CAT is applicable. This study has indicated significance of age for one year intervals. This would necessitate normative data for other ages, using a fairly short 'step interval' in ages.

Further research will have to be done with maladjusted children to determine norms for these groups as research to date suggests that maladjusted children do not differ from normal children in one consistent degree or direction.

These are but a few of the recommendations for more extensive studies with the CAT. It is felt that this important area in personality development has been long enough neglected.

Appendix A

Edmonton College Inc.,
9942 - 48 - 106 St.,
Edmonton, Alberta,
March 10, 1952

Dear Parent;

In an effort to increase our understanding of your child we would appreciate your co-operation in completing the following questionnaire. In this way we will know more about your child as an individual and be better able to cope with his needs.

Please return the questionnaire the day after you receive it. The driver will pick it up.

Yours sincerely,

(signed) A.L. Elston

Mrs. A. L. Elston
Lady Principal

EDMONTON COLEEGE KINDERGARTEN QUESTIONNAIRE

Name: Age:
Address: Birthdate:
Father: Mother:
Occupation: Occupation:
Parental History: Indicate below whether separated, divorced, living or deceased (including year of decease).

Brothers: Age Single Married

Sisters:

History of Childhood Disease or Major Accidents

Year Age Nature of Disease or Accidents Details

Innoculation or Vaccination

I. or V. Date Disease

Religious Affiliation:

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[1] Only research which may possibly apply to this thesis has been included in this Bibliography. Most of the information was obtained from a personal communication with Leopold Bellak or from the TAT Newsletter, Vol. 5, No. 3, 1951.

[2] Personal communication from Eugene Bird, January, 1952.

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